

PRODUCT SUBSTITUTION BY DEFENSE CONTRACTORS

HEARINGS BEFORE THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS OF THE COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE ONE HUNDREDTH CONGRESS FIRST SESSION

OCTOBER 15, 16, 1987

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1. Sentencing Memorandum, *U.S.A. v. The Spring Works, Inc., William McCullough & Stuart Baron*, dated April 6, 1987.
2. Suspension and Debarment letter to The Spring Works/Spring Wire and Design, Baron & McCullough from Gerald Werfel, DLA. January 8, 1987. Suspension letters (1 set of enclosures) and February 11, 1988 Debarment letter to Spring and Wire Designs.
3. August 11, 1987 Proposed Debarment letters for The Spring Works, Spring Wire and Design and Baron and McCullough, plus attachments.
4. Federal Register, July 31, 1987, part D. Debarment and suspension rules.
5. Correspondence between Meese and Weinberger and Weld's letter to Vander Schaaf plus attachments.
6. August 7, 1986 letter from The Spring Works re: name change and attachment.
7. October 28, 1985 letter from DLA to Spring and Wire Designs re: GIDEP alert and attachment.
8. November 3, 1986 letter from Wayne Aho to DCASMA re: GIDEP alert.
9. March 27, 1987 letter from Loud Engineering to DCIS. [Sealed.]
10. March 16, 1987 letter from Rockwell—Emmick. [Sealed.]
11. May 12, 1986 letter from General Dynamics—DCIS. [Sealed.]
12. May 6, 1986 letter from AiResearch—DCIS. [Sealed.]
13. March 31, 1987 letter from AiResearch—DCIS w/2 attachments. [Sealed.]
14. DCIS Reports of Investigative Activity. [Sealed.] July 10, 1987 (1 page). [Sealed.] August 26, 1986 (1 page). [Sealed.] June 24, 1986 (3 pp.) [Sealed.]
15. DCIS Report of Investigation (pp. 1-26). [Sealed.]
16. October 18, 1985 Report of Correspondence from Rupp-DCIS (10 pp). [Sealed.]
17. September 28, 1987 letter to PSI from Garrett AiResearch and 6 pp. attachment (including survey report of S&D).
18. September 16, 1987 letter to PSI from G&H (2 pp.).
19. July 3, 1985 letter from David Rupp to Peter Wanbaugh (w/attachments).
20. February 26, 1986 memo from Virgil Stites to Roger Stephenson (2 pp.) (subpoenaed).
21. G&H Supplier Quality Survey Report of SWD (September 12, 1986—10 pp.).
22. G&H Supplier Quality Survey Report (August 23, 1985 9 pp.).
23. September 22, 1987 letter to PSI from Paul Gray responding to Aho subpoena and 15 pp. attachment.
24. September 17, 1987 letter to Howard L. Shapiro from Richard Russell, Department of the Army.

25. October 7, 1987 G&H Letter with attachments (subpoenaed).
26. Letter from Aho to Friedman, Byrne and all employees and personal log.
27. June 9, 1986 letter from G&H—Rockwell.
28. November 8, 1986 letter from G&H—Boeing.
29. November 5, 1985 Memo (G&H from Stites)—Foadi.
30. General Dynamics Letter October 14.
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32. Chart—The Spring Works.
33. Schweitzer indictment.
34. Sentencing Memorandum (Schweitzer).
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44. DD 250—Material Inspection and Receiving Report (Sample).
45. Cancelled valve spec.
46. List of DCIS product substitution cases. [Sealed.]
47. 1987 copy of telex sent by Navy to locate nozzles.
48. DLA list of Alchemy's poor performance history on contracts.
49. DLA list of COC contracts at Alchemy.
50. June 6, 1986 Notice of Debarment of Alchemy.
51. November 21, 1983 Notice of debarment of Schweitzer.
52. DOD IG Report on Product Substitution (DOD IG).
53. Regulations on Certificate of Conformance (DOD IG).
54. 1983 cables from the Navy alerting them to nozzles.
55. Schweitzer interview memo August 28, 1987.
56. DOJ List of fraud resulting in convictions.
57. Criminal Incident Report/Schweitzer. [Sealed.]
58. DLA Quality Alert List.
59. Customer Complaint Investigation Report (Sample).
60. GAO Report/Defense Procurement Fraud (September 1986).
61. Letter from Parker Hannifin Corp. to Daniel F. Rinzel, dated October 8, 1987.
62. Memorandum of meeting with representatives of Defense Logistics agency dated September 9, 1987.
63. Memorandum of meeting with Ed Stacy, dated July 31, 1987.
64. Letter dated October 15, 1987 from Bob Dawson, Parker Hannifin Corp. to Daniel F. Rinzel.
65. Letter dated December 10, 1987 from June Gibbs Brown, Department of Defense Inspector General to Senator William V. Roth, Jr., with attachments.
66. FAR #FAC 84-21 dated August 29, 1986—Subpart 13.3—Fast Payment Procedure.
67. Memorandum from M.I. Stern, Department of Navy regarding Alchemy Fire Hose Nozzles dated October 29, 1987.
68. Letter of November 11, 1987 from Virgil Stites to PSI and attachments. (Letters from Virgil Stites to his customers regarding defective parts.)
69. Memorandum from M.I. Stern dated June 19, 1987 regarding Participation in the Government Industry Data Exchange Program (GIDEP).
70. Letters from Gerald Werfel to Stuart Baron September 24, 1987 regarding their debarment.
71. Memorandum of October 15, 1987 re: messages from DLA and the Department of the Navy dating from February 1983 regarding Alchemy nozzles.
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PRODUCT SUBSTITUTION BY DEFENSE CONTRACTORS

THURSDAY, OCTOBER 15, 1987

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:15 a.m., in room SD-342, Dirksen Senate Office Building, under authority of Senate Resolution 80, section 13, dated February 28, 1987, Hon. Sam Nunn (chairman of the subcommittee) presiding.

Members of the subcommittee present: Senator Sam Nunn, Democrat, Georgia; Senator Carl Levin, Democrat, Michigan; Senator James Sasser, Democrat, Tennessee; and Senator William V. Roth, Jr., Republican, Delaware.

Members of the professional staff present: Eleanore J. Hill, Chief Counsel and Staff Director; Daniel F. Rinzel, Chief Counsel to the Minority; Mary D. Robertson, Chief Clerk; Barbara Kammerman, Deputy Chief Counsel to the Minority; Stephen H. Levin, Staff Counsel to the Minority; Sallie B. Cribbs, Executive Assistant to the Minority Chief Counsel; Sean McAvoy (Senator Cohen); Rick Goodman (Senator Pryor); Larry Uhlfeldor (Senator Levin); Bob Carolla (Senator Mitchell); Marianne McGeltigan (Senator Rudman); Mary K. Vinson, Staff Investigator to the Minority; Carla J. Martin, Assistant Chief Clerk to the Minority; David Munson, Investigator; and David B. Buckley, Investigator.

[Senators present at convening of hearings: Senators Nunn and Roth.]

OPENING STATEMENT OF SENATOR NUNN

Senator NUNN. The subcommittee will come to order.

Today, the Permanent Subcommittee on Investigations begins two days of hearings on the problem of product substitution in defense contracting. The substitution of substandard and, in some cases defective, product for the use of our armed forces not only costs this country millions of dollars every year, but unnecessarily and often unknowingly, puts the lives of our military personnel in grave danger.

Forty years ago, the playwright Arthur Miller stirred this Nation with his drama "All My Sons." In that play, Miller told the story of Joe Keller, a man who could not see the interrelationship between people and events until he realized that his own son's death in World War II was the result of his sale of cracked cylinder

heads to the Air Force. Miller's play speaks about responsibility and the consequences of action—and, in a sense that is what these hearings are about as well.

This is why it is distressing to learn that in a recent Air Force survey, half of those contractors surveyed were found to have less than satisfactory quality assurance functions and over half were found to have unsatisfactory product integrity functions. Moreover, in a survey by the Defense Logistics Agency, 79 percent of those contractors surveyed were rated as unacceptable due to their inability to adequately control the quality of material they received from subcontractors.

It is equally distressing to hear, as we will this morning from the Department of Defense Office of the Inspector General, that those convicted in connection with cases of product substitution are receiving relatively minor sentences. Greater importance must be attached to these cases, not only by DOD in investigating them, but by the U.S. Attorneys around the country who prosecute them, and by judges who decide them. Those who would risk the safety of our armed forces for the sake of expediency or profit must be made to accept the full responsibility for their actions.

Finally, it is distressing to realize how extremely difficult it is to detect substandard and defective products before they are put into operation or even to track down and remove those products which have been identified as substandard after they have been put into operation.

Substandard or defective products as seemingly minor as springs, valves, seals, and bearings can lead to terrible consequences if used in critical applications. We need more effective ways to protect our armed forces from these potential consequences.

Despite our distress over these matters, we are encouraged by individuals such as Alexander Savicki and David Rupp, each of whom will testify before this committee. These individuals had the moral courage to face up to the fact that what their employers were doing was wrong. They accepted the responsibility and attempted to change the system of which they found themselves apart. We applaud their actions and hope that they will serve as an example for others.

This Nation asks a great deal of the men and women who serve in our armed forces. We ask them to risk their lives at the hands of foreign enemies for the defense of their country, and they willingly do it. However, it is unacceptable, indeed it is outrageous, to ask them to risk their lives at the hands of their own equipment, when equipment problems can be avoided.

In Arthur Miller's play, it took the death of his own son before Joe Keller realized that the other young men whose planes had crashed as a result of the cracked cylinders he had supplied were indeed all his sons. Fortunately, there are those in Congress, such as Senator Roth, who do not need such stark reminders of the responsibility we all owe to the brave men and women of our military. I commend you, Senator Roth, and the Minority Staff for your fine efforts in making today's hearing possible. You have taken the lead in these hearings. We have helped you where you have asked for help, but you are primarily the people who are to be

commended for bringing these problems to our attention, and I am sure that these will be very beneficial hearings.

I congratulate you and your staff. I am going to have to be in and out. We are starting our Conference on Military Procurement today. I am going to be here as much as I can, but I will ask you to preside in my absence.

OPENING STATEMENT OF SENATOR ROTH

Senator ROTH. Thank you, Mr. Chairman.

I thank you for holding these hearings this morning. I fully appreciate and understand the problem of being in two places at the same time. I regret that you can't be here throughout the morning.

I do appreciate the fact that we are holding this hearing on what I consider to be a very alarming subject, and that is the willful misrepresentation of products furnished by some contractors and subcontractors to the government, including bogus parts or substandard parts.

I know that you, as the Chairman of the Armed Services Committee, as well as Chairman of PSI, have a deep interest in this subject, and I hope that, working together, we are able to do something about it.

The Department of Defense calls these product substitutions COME UPS, that is their acronym for counterfeit material and unauthorized product substitutions. This is what these hearings are about, the COME UPS—and, really, whether those who would defraud the government in this way are getting their proper comeuppance.

I want to make clear that we are not talking about whether the DOD contracts for unnecessary and expensive parts or procedures, though that is a problem of continuing concern to me. What we are focusing on here is the unlawful and dangerous failure of defense contractors to provide the safe and effective products they have promised.

I want to say at the outset that we are not talking about all contractors. The vast majority, I am confident, want to live up to their contracts. But there is a significant number of unscrupulous contractors who would try to take advantage of the system so it is important that we have these hearings today.

What we are concerned about is danger, and, frankly, danger is what we found. For example, this nozzle I have here is the type used to put out fires on ships, obviously a very, very important piece of equipment. The Department of Defense contracted to buy almost 3,500 of these nozzles from one contractor for use on our ships throughout the world.

Unfortunately, as we will hear today, that contractor used inferior materials. The bottom line is that the Navy later found out that 70 percent of them failed on the first use. I shudder to think about what that could mean. A fire on a ship at sea can be a terrible thing. There is, after all, no place to run. Our fighting men ought to at least have the assurance that if such a fire does occur, they will have equipment that will fight it effectively.

The contractor who supplied these nozzles is now in jail, where he should be. But the facts of that case still leave some unanswered

questions. How could almost 3,500 defective nozzles have passed through DOD's quality assurance program?

How is it that today—almost three years after a grand jury indicted the contractor—no one at the Navy or the Defense Logistics Agency has been able to assure us that all of the nozzles have been removed from our ships?

When I asked my staff to find out for ourselves, we found one of the defective nozzles on the USS *Nassau*, a ship that carries helicopters and amphibious assault vessels as well as Marines. Thank God that nozzle was discovered before some unsuspecting sailor had the misfortune to try to use it to put out a fire.

Clearly, it is an enormous task to account for so many goods. But it is a task that must be completed successfully because the lives of our servicemen and women depend on it.

In the second case we will hear about today, one company, The Spring Works, supplied substandard springs and other items without the processing needed to assure that the part would hold up under stress or even under normal circumstances. To look at them, they look like ordinary springs, but they were specially ordered for particular needs. For example, they are used in the hydraulic landing gear and wing flaps of aircraft. If the spring fails, the consequences to our service men and women could be deadly.

Again, the owners of The Spring Works went to jail, but only for a few months. Astonishingly, it seems like jail did not stop them from continuing pretty much with business as usual, as we will hear today.

Springs made by this company also found their way into the Space Shuttle, intercontinental ballistic missiles, submarines, the B-52 bomber, the F-14 fighter, and an amazing number of other military projects. We have a chart that shows only some of the end-products that contain springs from The Spring Works.¹

The tragedy is that not only a very valuable piece of equipment could be destroyed, but more importantly our servicemen's and women's lives are at stake.

In my view, when the U.S. Government contracts for a finished product, it deserves to get that product delivered in effective working order, meeting contract specifications. If a subcontractor is allowed to cut corners that affect quality and safety of the product, then the prime contractor ought to be called to task as well as the subcontractor.

There are many issues to explore here, but they all boil down to one question: Are we doing everything we can do to discourage the wrongdoers? Are we doing what we can to protect or servicemen and women? The last thing on their mind when they are in combat should be whether their own equipment has been booby-trapped by irresponsible contractors.

I am pleased that we will hear today from the Deputy I.G. for the Department of Defense, the Honorable Derek Vander Schaaf, whose office has made unauthorized product substitution cases its investigative priority. I also want to commend him personally for his recognition of the importance of this problem.

¹ See p. 150.

The men and women of that office also deserve a great deal of credit for their work. So do the U.S. Attorneys who have been prosecuting these cases. But, unfortunately, more needs to be done.

We will also hear from witnesses who blew the whistle on several product substitution cases as well as from some representatives of industry.

Again, Mr. Chairman, I thank you for holding these hearings. I hope this is a matter that we can deal with effectively in the future.

[Senator Roth's prepared statement follows:]

STATEMENT OF SENATOR ROTH

I want to commend our distinguished Chairman, Senator Nunn, for holding this hearing on a very alarming subject: the willful misrepresentation of products furnished by contractors and subcontractors to the government, including bogus parts or substandard parts. I know that as Chairman of the Armed Services Committee as well as PSI, Senator Nunn has a deep interest in this subject, and I hope that he and I, working together, will be able to do something about it.

The Department of Defense calls these product substitution cases COME UPS—the acronym for counterfeit material and unauthorized product substitution (CM/UPS). These hearings are about the COMEUPS—and, really, whether those who would defraud the government in this way are getting their proper comeuppance.

I want to be clear that we are not talking about whether the DOD contracts for unnecessary and expensive parts or procedures, though that is a problem of continuing concern to me. What we are focusing on here is the unlawful and dangerous failure of defense contractors to provide the safe and effective products they have promised.

Danger is what we're concerned about and, frankly, danger is what we found. For example, this nozzle I am holding is of a type used on ships to put out fires—a very important piece of equipment. The Department of Defense contracted to buy almost 3,500 of these nozzles from one contractor for use on our ships throughout the world. Unfortunately, as we will hear today, that contractor used inferior materials. The bottom line is, as the Navy later found out, that 70 percent of them fail on the first use. I shudder to think about what that could mean. A fire on a ship at sea can be a terrible thing. There is, after all, no place to run away. Our fighting men ought to at least have the assurance that if such a fire does occur, they will have equipment to fight it that works.

The contractor who supplied these nozzles is now in jail, where he should be. But the facts of that case leave me very concerned. How could almost 3,500 defective nozzles have passed through DoD's quality assurance program? How is it that today—almost three years after a grand jury indicted the contractor—no one at the Navy or the Defense Logistics Agency has been able to assure us that all of the nozzles have been removed from our ships?

When I sent my staff to find out for ourselves, we found one of the defective nozzles on the USS Nassau, a ship that carries helicopters and amphibious assault vessels as well as Marines. Thank God that nozzle was discovered before some unsuspecting sailor had the misfortune to try to use it to put out a fire. Clearly, it's an enormous task to account for so many goods. But it's a task which must be completed successfully because the lives of our servicemen and women depend upon it.

In the second case we will hear about today, one company, The Spring Works, supplied springs and other items of inferior material and without the processing needed to assure that the part would hold up under stress or even in normal circumstances. For example, springs like these are used in an airplane's hydraulic landing gear or flaps; if the springs fail, the consequences could be deadly.

The owners of The Spring Works went to jail, although only for a few months. But, astonishingly, it seems that jail didn't stop them from continuing pretty much with business as usual, as we will hear today.

Springs made by this company also found their way into the Space Shuttle, Intercontinental Ballistic missiles, submarines, the B-52 Bomber, the F-14 fighter and an amazing variety of other military projects. This chart shows only some of the end products that contain springs from the Spring Works. The problem is that we don't know for sure which springs are faulty, and we don't know for sure where the faulty ones are. Some defense contractors have made much more vigorous efforts than others to find the faulty springs. I understand Rockwell spend some \$1.5 mil-

lion to trace and replace some Spring Works products used in the Space Shuttle. But another company we will hear from has made no efforts to replace springs which are components of other parts of the Shuttle.

This apparent lack of concern exhibited by some defense contractors involved in The Spring Works Case is very troubling to me. The DOD Inspector General can investigate vigorously, as he has done. The Department of Justice can prosecute vigorously, as it has done. But unless the prime contractors themselves get serious about product substitution, this type of fraud will never be brought under control. In my view, when the U.S. Government contracts for a finished product, it deserves to get that product delivered in working order. If a subcontractor is allowed to cut corners that affect the quality and safety of the product, then the prime contractor ought to be called to task as well as the subcontractor.

There are many issues to explore here—but they all boil down to one compelling question—are we doing everything we can do to discourage the wrongdoers? Are we doing what we can to protect our servicemen and women? The last thing on their minds during combat should be whether their own equipment has been booby-trapped by irresponsible contractors.

I am pleased that we will hear today from the Deputy Inspector General for the Department of Defense, the Honorable Derek Vander Schaaf, whose office has made unauthorized product substitution cases its investigative priority. I want to commend him for his recognition of the importance of this problem. The men and women of that office also deserve a great deal of credit for their work. So do the U.S. Attorneys who have been prosecuting these cases. But more needs to be done. We will also hear from witnesses who blew the whistle on several product substitution cases as well as some representatives of industry.

Again, I want to thank Senator Nunn for scheduling these hearings. I hope that the Subcommittee will be able to continue this investigation in the future because I believe there is far more to be discovered.

Senator NUNN. Thank you, Senator Roth.

Since I am going to be in and out, I am going to ask you to be the presiding officer here, if you would.

Senator ROTH. Thank you, Mr. Chairman.

Our first witness will be Mr. Levin.

Will you please rise? Do you swear that the testimony you will give before the subcommittee will the truth, the whole truth, and nothing but the truth, so help you God?

Mr. LEVIN. I do.

Senator ROTH. Please be seated, Mr. Levin, and please proceed.

TESTIMONY OF STEPHEN H. LEVIN, STAFF COUNSEL, PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

Mr. LEVIN. Thank you, Mr. Chairman, Senator Roth.

I have a prepared statement, which I have given to the clerk, which I will summarize here.¹

The Minority Staff of the subcommittee has been investigating the extent to which defense contractors and subcontractors are supplying the Department of Defense with substandard and defective products. The staff interviewed personnel within the components of the Department of Defense which are responsible for procurement and supply. We interviewed large and small defense contractors, contractors who were involved in product substitution schemes, and victims of those schemes.

Further, in one of the cases which will be discussed this morning, which involves defective fire hose nozzles for navy ships, we developed information during the course of our investigation indicating

¹ See p. 75.

that some of these nozzles might still be on navy ships, although it had been five years since they were first discovered to be defective.

We went to great length to determine whether that was the case. Initially, however, we made little progress. We then attempted to determine which ships had probably received these defective nozzles, and I visited the Naval Supply Center in Norfolk, Virginia, and inspected several of those ships at the Norfolk Naval Base.

During that inspection, I discovered one of the defective nozzles on board the USS *Nassau*, and amphibious ship. Further, I spoke with an officer who, in the course of firefighting drills aboard a weapons ship—

Senator ROTH. Mr. Levin, could I ask you this. Is this the nozzle that you were investigating?

Mr. LEVIN. Yes.

Senator ROTH. Thank you.

Mr. LEVIN. Further, while in Norfolk, I spoke with an officer who, in the course of firefighting drills aboard a weapons ship, the USS *Butte*, discovered that that ship had six defective nozzles.

Subsequently, the Navy has initiated efforts to account for the remaining nozzles, and Rear Admiral Abele will testify this morning about those efforts.

Overall, during the initial part of this investigation, we found that product substitution is, in fact, a significant problem facing the Department of Defense. DOD reports that the Defense Criminal Investigative Service is currently investigating 231 active cases, which may involve product substitutions. Further, between January 1, 1986, and October 15, 1987, 85 companies and individuals were indicted on product substitution based charges.

Deputy Inspector General Derek Vander Schaaf will testify this morning in more detail regarding efforts by the DCIS to combat product substitution.

The range of substandard and defective products supplied to the Department of Defense really runs the gamut, from breach bolts for M-16 machine guns and guidance fins for Sidewinder missiles to surgical instruments.

The staff found that it is almost impossible to accurately assess the cost of tracing down the defective parts because it involves so many steps taken by both the public and private sectors. What is clear is that product substitution results in time delays and additional costs to all parties involved, including our military personnel who are placed at a severe disadvantage even when these defective parts are discovered because it delays their access to necessary equipment and supplies.

As Senator Roth noted, today's hearing will focus on two cases, which are typical of product substitution matters, except insofar as the defendants ended up serving time in prison, and in one case received an usually lengthy sentence of 15 years.

One of the problems that the staff discovered is that criminal defendants in product substitution cases seldom receive sentence of significant deterrent value.

Our investigation of the Alchemy nozzle case also revealed an apparent problem in the DOD's capability to track down defective products once they have been identified. After all, identifying a

faulty product is only half the battle. That product must then be located and either repaired or replaced.

Another common problem in product substitution cases is falsified certifications.

Senator ROTH. Could I ask you a question or two before you proceed.

You make the comment that the punishment doesn't fit the crime, or it has been too light in your judgment. Is that because these are looked at as white collar crimes which are not of serious moment, when, in fact, they very much involve the safety of our fighting men and women. Is that the point you are making?

Mr. LEVIN. Yes, Senator, that is correct. Most prosecutors feel that because of the white collar nature of most of the product substitution cases, significant prison sentences are not handed down.

Senator ROTH. To your knowledge, has anything been done by the Justice Department to try to bring about a better understanding of what is at stake?

Mr. LEVIN. Yes. In fact, I think that Mr. Vander Schaaf can probably testify in more detail about that. There has been contact between DOD and DOJ regarding the priority which product substitution cases ought to be accorded by the U.S. Attorneys offices.

Senator ROTH. Please proceed.

Mr. LEVIN. The problem of false certifications is exemplified particularly well in the second case, which will be discussed at this hearing involving a company called The Spring Works.

We were amazed to find out the degree to which specialty springs made by this small company had managed to contaminate many of this country's major weapons systems and aircraft. The chart to which Senator Roth referred indicates only some of the items which included springs manufactured by the Spring Works. Others include the F-15 and F-18 fighters, the B-52 bomber, and the Peacekeeper, Minuteman, and Cruise missiles.

Further, during the course of the investigation, the staff discovered that a successor company to The Spring Works, called Spring and Wire Designs, was operating at the same location, doing the same type of business, and employing some of the same personnel, including one of the former owners after his release from prison.

As a safeguard against unscrupulous contractors, DOD employs a multilevel quality assurance system in an attempt to discover some—

Senator ROTH. Again, could I ask you a question there?

Are you saying that after the individuals concerned were found guilty and jailed, and were debarred from government contracting, one individual was rehired by this company?

Mr. LEVIN. Yes. The owners were found guilty, jailed and debarred. Then, one of the former owners was rehired upon his release from prison.

Senator ROTH. But they were able, merely by certain superficial changes, to continue in business while the management was in jail?

Mr. LEVIN. That is correct.

Senator ROTH. Please continue.

Mr. LEVIN. The foundation of the DOD quality assurance system, or the quality assurance representatives, the QARs, are the individuals who actually inspect the products prior to their being accepted

by DOD. However, one problem on which both industry representatives and DOD personnel agree is that the majority of the QARs are under-qualified for this important job.

When DOD discovers cases of product substitution, after it has accepted the goods, it follows a two-pronged approach. First, DOD must track down the items and either repair or replace them, and then the focus shifts to how to sanction the offending contractor.

We found that tracking down defective parts can be almost impossible, especially with generic products that are made by more than one manufacturer, as is often the case. There is a system in place to trace the product to a particular bin in the Supply Center. However, once an item is requisitioned and sent from the Supply Center to the end-user, it is almost impossible to trace which company's product is shipped to which end-user.

As for punishing the wrongdoer, there are several sanctions available to the government. First, the government can and does prosecute under a number of criminal statutes. Law enforcement officials agree, however, that the major problem in the system is the sentencing. That is, no matter how strong a case they have, the defendants receive sentences which are simply too lenient to serve any significant deterrent purpose.

Second, the government can debar or temporarily suspend a contractor from government contracting for a number of reasons, including a criminal conviction, fraud or other actions indicating a lack of business integrity. GSA publishes a list of debarred and suspended or ineligible contractors.

Under current law, there is no prohibition preventing debarred entities from being subcontractors to companies which have direct contracts with the government, even though debarred entities cannot themselves contract directly with the government.

However, under proposed new regulations, companies which contract with DOD will be precluded from using debarred entities as subcontractors if the subcontracts exceed \$25,000. DOD can permissibly do business with prime contractors who subcontract with debarred entities if the contract is for less than \$25,000.

However, this threshold may be of dubious value since we found many of the criminal product substitution cases involve contracts of less than \$25,000.

Third, the government can also proceed against wrongdoers by initiating a civil action for damages or, under the new program of the Fraud and Civil Penalties Act of 1986, initiate an administrative action for claims below \$150,000. We understand that the regulations for such proceedings have been developed and are about to be finalized.

At this time, Senator, I would like to introduce into the record materials, both sealed and unsealed, relating to the two cases which will be the focus of this hearing, as well as other documents which we have obtained during the investigation.¹

I would also request that the record remain open insofar as we still have some outstanding requests for documents.

I would be happy to answer any questions that you might have.

¹ The list of exhibits referred to may be found on p. IV in the table of contents.

Senator ROTH. Those documents will be included in the record.

Let me go back to the point you made about the proposed regulations which would not cover subcontracts under \$25,000. Let's look at these springs. These are not very expensive, I think that is pretty obvious, and yet by their utilization in various kinds of planes and weapons systems, the impact of purchasing 10,000 or 20,000 of these springs could be very major, couldn't it?

Mr. LEVIN. Absolutely. What we found was that, in fact, most product substitution cases do involve contracts that are of less than \$25,000.

Senator ROTH. I want to make this very clear. You are not suggesting that small business isn't as responsible as any, but there tend to be some fly-by-night operators of small financial worth.

There is a vote on, so I will temporarily suspend the hearing.

[Recess.]

Senator ROTH. At this time, I would like to call forward Mr. Derek Vander Schaaf, the Deputy Inspector General for the Department of the Defense.

If all of you would please raise your right-hand. Do you swear that the testimony you will give before the subcommittee will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. VANDER SCHAAF. I do.

Ms. OWENS. I do.

Mr. KOONS. I do.

Senator ROTH. Mr. Vander Schaaf, if you would introduce the other members of your panel.

TESTIMONY OF DEREK J. VANDER SCHAAF, DEPUTY INSPECTOR GENERAL, DEPARTMENT OF DEFENSE,¹ ACCOMPANIED BY SYLVIA OWENS, SPECIAL AGENT, AND ROBERT KOONS, SPECIAL AGENT

Mr. VANDER SCHAAF. I have with me here, on my right, Ms. Sylvia Owens. She is the Special Agent primarily responsible for the government's investigation in the Spring Works case. On my left is Robert Koons, from our Philadelphia office. He is the Special Agent who has worked on the Alchemy case. That involves the nozzle that you made reference to and a lot of other defective parts. As you see, Senator, I have a hardware store in front of me, and I will discuss some of those parts.

Should I proceed with some opening remarks?

Senator ROTH. Please.

Mr. VANDER SCHAAF. Let me first comment on the staff statement that I heard earlier. I have not had an opportunity to read the staff statement so I am a little bit uneasy about commenting on it. However, I agreed with most of what I heard. However, I want to correct a couple of impressions left by the first witness.

I think he left the impression that we are not suspending and debarring contractors who provide us with these defective products. Maybe we are not always as effective as we should be. However, in 1980, before we started to encourage the use of debarments and

¹ See p. 97 for Mr. Vander Schaaf's prepared statement.

suspensions, we had about 75 suspensions and debarments annually in the Department of Defense. Last year, we had over almost 900 suspensions and debarments. You can see we are serious about it.

You are right in the comment that we don't always get the person out of business completely. They will try to rework or restructure themselves in some way to come back at us through another mode or through another name. However, we do our best to prevent that. We may get into some specifics on that during my testimony.

Senator ROTH. I think his testimony was only with respect to The Spring Works.

Mr. VANDER SCHAAF. The Spring Works Company has been debarred now. I understand that it happened during the past 30 days or so.

Senator ROTH. Let me ask you. When was the Grand Jury indictment?

Mr. VANDER SCHAAF. It was in 1986. Most of the Grand Jury action took place in 1986. The conviction was in early 1987.

Senator ROTH. I appreciate the fact that you have to move with care in debarring, because, obviously, you don't want to hurt the innocent who may be improperly accused. But what is the period of time that suspension takes normally, from the time the matter is raised?

Mr. VANDER SCHAAF. It varies. It is usually a matter of months. If we have an indictment we will go to suspension in a matter of three to six months. Following a conviction and we will have a debarment in a matter of days; unless there have been special circumstances. For example, if the management of the company has cooperated throughout the investigation, or there was a voluntary disclosure; we would probably not suspend or debar.

But in most of the cases that we are talking about today, management obviously didn't cooperate. Management was the cause of the problem.

Senator ROTH. We can probe this issue further during your testimony. At this time, the only question that I have concerning This Spring Works is that even if the company is suspended from government contracting under current rules, it still can work as a subcontractor on government contracts; is that not correct?

Mr. VANDER SCHAAF. That is not correct. We have a suspended bidders list. Your staff brought up the issue of the \$25,000, and I am not familiar with that problem.

Senator ROTH. It is my understanding that those rules were in the process of being changed, but they have not been effectively changed with respect to subcontractors.

Mr. VANDER SCHAAF. I will go back and check. I thought the rules had been changed, and that they could not. Most of our contractors, I am sure, have taken positions that they will not purchase equipment from suspended or debarred contractors. Whether they are outlawed, if you will, by the FAR or DAR regulations, I will go back and check the regulations that are in effect.

Senator ROTH. It is my understanding that a proposal has been made and they are open for comment at this time. But they make an exception for those subcontractors who are involved with contracts of \$25,000 or less. So even if this proposed ruling becomes

the law, it will not affect those small outfits that are subcontracting.

Mr. VANDER SCHAAF. I will tell you, if this rule is still out for comment, and my office has not commented on it, we would certainly object to that kind of a loophole in the rule.

Senator ROTH. That is the reason that we are raising it, because a lot of the outfits that are cheating are fly-by-night operations.

Mr. VANDER SCHAAF. Certainly, and that is the problem. The money that those contracts involve, as earlier stated, the small contracts may be \$25,000 or less.¹

Senator ROTH. Let's proceed with your testimony.

Mr. VANDER SCHAAF. Yes.

I will not read my entire statement, if you don't mind. I will place it in the record.

I did want to emphasize that from day one, product substitution has been, in terms of our criminal investigative priorities, the number one priority. Procurement has been our overall priority, but product substitution has been the number one priority. We come down harder on product substitution cases than we do on anything else.

Senator ROTH. As I said in my opening comments, I congratulate you. It is a very important initiative.

Mr. VANDER SCHAAF. I thank you. I should add, Senator, that we wouldn't be here if it were not for a lot of your work in the early 1980s. I am well aware of that, and I appreciate it.

One thing that I ought to explain in more detail is what we mean when we use the term "product substitution." We are not only talking about material that doesn't conform as an example some of the material in front of me. We are also talking about other problems such as foreign produced products which attempt to avoid the Buy America Act. We are also talking about equipment purchased from some source other than an approved source, or the original equipment manufacturer. We are talking about material that may be perfectly all right, but was not tested and therefore we are not sure that it is all right. These all fall under that larger heading of product substitution.

I look at this problem as our number one priority primarily because it is something we can do for the troops. It is something that we can do in answer to that question: "What have you done for me lately?" The sort of thing that you see in Army posters. It is really important, as you stressed in your statement, and I wanted to re-emphasize that aspect of it.

We try to make sure that the system knows about a defective product as soon as we find one. We have had to reeducate ourselves in some respects. The criminal investigators, sometimes have a tendency or a desire to be very secretive about their work, as they should be, because that work is very much a private matter. But when we get into product substitution cases, we have to put another consideration ahead of this need for secrecy. We have to think about the danger that these products could pose to human life. We have to put that ahead of secrecy.

¹ See p. 151 for a November 3, 1987, memorandum.

I frankly admit that we had some difficulties in the Office of Inspector General early on with special agents desiring to keep their cases close at hand; not to lose a criminal investigation because they had to announce throughout the Department of Defense that this or that supplier was accused of providing poor products.

There was a reeducation process that took place. I will mention one case specifically where we learned to do that, in that case a firm in Minnesota that made castings that hold the seeker head for the Phoenix missile. This is an example of those castings. [Holding up a sample casting.] They look perfectly all right from a distance. You can't see that anything is wrong with them. But we had an employee in that particular firm who indicated that the company was using remelted aluminum and not virgin ingots. It was welding some of these castings.

We got into this case, and, first of all, we didn't get the word out, to warn the Navy as quickly as we could have. We also found that we couldn't rely upon program managers to necessarily want to know the bad news about this, because it is not necessarily in their interest to hear this bad news. From a personal standpoint, it slows down their program, it interferes with their work, and it does a lot of other bad things.

We asked the prime contractor to take a look and test some of these samples. The prime contractor came back and said that the samples were all right. We sent the samples to the FBI lab and we found that the samples were, in fact, defective.

[At this point, Senator Levin entered the hearing room.]

Senator ROTH. I would like to ask a question here, because it seems to me that the problem breaks down into two aspects. The first one is preventive, which is the most important, obviously. Isn't it primarily the responsibility of the prime contractor to ensure that not only the end result but all the components meet the specifications so that the prime is really the key as far as the preventive aspects.

Mr. VANDER SCHAAF. Absolutely, sir. The prime contractor has to be the key. The other key is that we have to build this into our production system and our procurement system. We can't really check it in, if you will. We have to have steps in place in the manufacturing process to be sure that poor stuff is weeded out.

I can show you an example here of what happens with this overall problem by using some calculations the Navy provided me.¹ By their calculations if you take electronic components, for example and assume that 98 out of every 100 electronic components are perfect.

These electronic components are going to go on a circuit board that has 200 parts on it. Let us assume that that contractor is producing 98 out of every 100 which are good. If we put those components on a circuit board and test that circuit board the first time around, only 1.8 percent of those circuit boards will work, even though 98 percent of the product going into it are good.

This is how critical this problem becomes. We have to drive toward making sure that 100 percent, or 99.99 percent of the elec-

¹ See p. 157.

tronic components we put in this complex equipment meet the specs. If they don't we have real problems.

You can see from these Navy figures that they go from approximately two-tenths of 1 percent if we are producing 97 percent good products. We put 200 items on one circuit board, we are going to have less than 2 percent of the circuit boards pass the test the first time. This gives you an indication of the criticality of this business.

I think that the statistics with respect to some of our actions have been brought out. We have had 85 convictions in the past year-and-three-quarters. We issue a press release on each conviction, Senator. We want to make sure that the public is aware that we are looking at this problem, and that other smaller manufacturers know they take a high risk when they do try to pass off shoddy products to the Department of Defense.¹

Senator ROTH. Let me ask you a question here. When one is debarred or convicted, how is that information disseminated so that defense contractors are aware of that fact?

Mr. VANDER SCHAAF. Notice of debarments and suspensions goes on a Federal government-wide list, and it also goes on a Defense Department list as well. That government-wide list is distributed to every buying center and activity in the Department of Defense, the National Aeronautics and Space Administration, and the General Services Administration.

Senator ROTH. I am a private contractor, either a prime contractor or a subcontractor. What do I have to do to obtain that information?

Mr. VANDER SCHAAF. That list is available to the contractors I think there is a certification that they make that they are not purchasing equipment from a debarred source. There is some difference in your understanding and my understanding on that, Senator, but I will go back and check. However in most cases, I believe that our prime contractors are themselves checking. We check as well during the negotiation process and the review process to determine that the sources are not suspended or debarred contractors.

Senator ROTH. Is that what is known as GIDEP?

Mr. VANDER SCHAAF. No.

Senator ROTH. Is that on a GSA list?

[At this point, Senator Nunn returned to the hearing room.]

Mr. VANDER SCHAAF. It is a GSA list of suspended and debarred contractors that the Government maintains. There is also the Defense Department procedure for distributing that list to our activities.

The GIDEP, the Government/Industry Data Information Exchange is a technical support system that the logistics commanders use to inform the operating forces, and the supply and maintenance facilities in the Department, that a particular part is defective or needs to be adjusted or that some other special action needs to be taken.

It involves all manner of problems that could arise.

¹ See p. 152 for a list of product substitution indictments.

Senator LEVIN. On that subject, while you are pausing right there, you say that the list is available. Is that list sent to primes, or is it just available in some library?

Mr. VANDER SCHAAF. Senator, I can't answer that question for sure. I think it is just available. However, contractors have a responsibility when they accept the contract not to do business with suspended or debarred contractors.

Senator LEVIN. How many would have knowledge about debarred contractors, 1 out of 10, 1 out of 100? How many would actually have that knowledge?

Mr. VANDER SCHAAF. I would assume that all of our major contractors, who have large purchasing departments, have lists of suspended or debarred contractors.

Senator LEVIN. One other question on that point. You say the large contractors, but that is not necessarily a very large percentage of our prime contractors; is that correct?

Mr. VANDER SCHAAF. That is right, but it is a large percentage of the dollar business, a very large percentage of the dollar business.

Senator LEVIN. It might be useful if you could just give us some estimate, for the record, as to what percentage of primes have actual knowledge of the list of debarred subcontractors.¹

Mr. VANDER SCHAAF. I will see if I can do that. I am not so sure I can.

Senator ROTH. I would like to suggest even going one step further. I agree with what Senator Levin has requested, but I think that it is critically important that some review be made as to how this kind of information is disseminated because it does no good to have somebody debarred if the industry is not aware of that fact. We also have the problem of what we are going to do about subcontractors, which we have already discussed.

So I would like to urge you, as well as the Defense Department itself, to look at the adequacy of notice to contractors and subcontractors when that somebody has been sanctioned in this manner.

Senator LEVIN. If you would yield for one further point on that, Senator Roth.

Does the certification that you have referred to require the prime to have actual knowledge or is it the best of his knowledge? Do you know the wording of that certification?

Mr. VANDER SCHAAF. No, I don't know the precise wording of that certification, Senator.

Senator LEVIN. It would make a very big difference if the prime certifies that to the best of his knowledge, he is not doing business with any debarred subcontractor, and that is a very different certification from "I am not doing business with debarred subcontractors."

Mr. VANDER SCHAAF. I would assume that the certification is the former, and not the latter; that is the weaker one.

Senator LEVIN. If we could check that also.

Mr. VANDER SCHAAF. Yes.

Senator LEVIN. Thank you.

Senator ROTH. Please proceed.

¹ See p. 156.

[At this point, Senator Levin departed the hearing room.]

Mr. VANDER SCHAAF. What I wanted to do next is discuss two of these cases. I know that you want to get into The Spring Works case. I will not get into it at this point. I would like to give you some other examples of the kinds of things and problems that we have, Senator.

I have mortar fins, for example, that were badly machined. Some are too long, some are too short. This caused mortar rounds to fly erratically, with the dangers quite apparent.

Another company that was convicted had provided us with M-60 machine gun pistons that make the machine gun cycle and fire. They will jam and break after a short series of shots. Again, a real problem. We had to go back and rescue those parts from the system.

The Alchemy case, I think, is a particularly interesting case. That company, like many companies that get caught and that are involved in product substitution, don't limit their scams to product substitution. They get involved in false certifications. They get involved in taking test certifications and changing them.

The Spring Works case is interesting to note. In this case the Mitchell Laboratories, Incorporated sent them a test report on a penetrant inspection, and they have a quantity of 50. Here is the actual original test certification document that came from Mitchell Laboratories.¹

What Spring Works, in this case did, was to take the number "50," white it out, and changed it to "5,000," and showed the government that 5,000 springs had been cleared. This is a typical example, and I am sure that Sylvia here has many more of that kind of example of a false certification and its use.

Senator ROTH. Could I look at that certification please?

Mr. VANDER SCHAAF. Yes.

Senator ROTH. Please go ahead.

Mr. VANDER SCHAAF. I will not discuss all of these other examples. However I ought to mention, because it didn't come out in the earlier testimony, what is really wrong with the firefighting valve.

There is nothing defective on the outside of the valve that is apparent. It is what is buried inside of it that is the problem. There is a little round ball in here that changes the spray from the fog nozzle to the full stream. That ball is made of defective material. It wasn't machined properly, and it will fail, as someone said, when the valve is turned on. Then, of course, there is a real problem if fire fighters have to leave the hose. You have 150 pounds of water pressure coming out of this very heavy valve, and it starts swinging around and it can endanger people.

The other big issue that I should mention that we face and have many investigations ongoing, involves fasteners and bolts. You have probably read about that subject in the newspapers. We have some 30 of those 231 cases that your investigator mentioned that involve those non-conforming bolts. It is a major problem with us right now in the Department. We are trying to clean that mess up,

¹ See p. 158.

find all those bolts, get them out of the systems, and then put in place procedures to keep that from happening in the future.

Senator ROTH. Could I go back to the certification. Is the language in the certification that of a standard government certification?

Mr. VANDER SCHAAF. I am not sure that there is a formal certification as such. I am not 100 percent sure that we even make them certify. I think that when he signs the contract document, the document itself says that there is no dealing with suspended or disbarred contractors.

Senator ROTH. Are you a lawyer?

Mr. VANDER SCHAAF. I am not, sir.

Senator ROTH. One of the questions I have as I read this certification—

Mr. VANDER SCHAAF. You are talking about the testing certification in the Spring Works case. I thought that you went back to Senator Levin's certification process.

Senator ROTH. Is that it appears to require the subcontractor who is supplying the part to sign a certification for all sales to government and prime contractors; is that correct?

Mr. VANDER SCHAAF. If that particular part requires conformance to a certain mil spec, then the contractor has to make the certification or show us the test results that that mil spec has in fact been complied with. That is what that document does.

Senator ROTH. Does the certification merely require that it has been tested in conformance with the specifications? Let me read what it says here:

We hereby certify the parts listed have been tested in conformance with the specification noted. This report represents Mitchell Laboratories' interpretation of the results obtained from the test, and it is not to be construed as a guarantee or warranty of the condition of the materials tested.

Do you know whether or not this is a standard kind of certification statement?

[At this point, Senator Levin returned to the hearing room.]

Mr. VANDER SCHAAF. I believe that this is a typical statement.

Senator ROTH. There is no warranty that it meets the specification.

Mr. VANDER SCHAAF. No. The laboratory, I would say, is only warranting that they did that test. In that case, they did a penetrant test on those springs.

Senator ROTH. Go ahead.

Mr. VANDER SCHAAF. There is one other point that I would like to make, Senator, and that is to divide the problem into the criminal and the non-criminal.

I know that we have been concentrating on the criminal aspects of this problem of non-conforming products, but probably the non-criminal aspect is more important in terms of the cost to the Department of Defense. We are talking about instances when somebody makes something wrong, knows that they have made it wrong; knows that it doesn't conform to the specs, and then ships it anyway.

In many instances, there is shoddy workmanship or other problems or lack of uniformity in the quality of the product, and then it

enters our system. Then we have the problem that I talked about with regard to those circuit boards.

We have tried to go after both sides of this problem through my office. Largely on the criminal investigative side, we have looked at the shoddy material. Our audit staff has worked hard on the quality assurance program; that is what can we do to make sure that the quality assurance program works in the Department.

Do military-uniformed members report back deficiencies when they find them? If they don't report them back, why don't they? Does the system respond when they report these deficiencies? Unfortunately many times that system isn't working as well as it should be. There are corrective measures being taken, but it is a constant problem that the Department has to continually be aware of.

I think that the entire defense industry is aware of quality problems. They have put more emphasis on the reduction of scrap and rework, and avoiding getting bad products into the system.

With that, I will try to answer any further questions that you may have.

Senator ROTH. Senator Levin, you didn't get a chance to make an opening statement.

Senator LEVIN. I have no opening statement.

Senator ROTH. Let me ask you this. In the case of the nozzles, how is it possible to buy 3,500, when the test shows that 70 percent of those tested didn't work effectively the first time?

As I understand, these purchases were made directly by the Government, not through a prime contractor. What does that say about our quality assurance program?

Mr. VANDER SCHAAF. It says that we have some weaknesses in the quality assurance program. But in this case, remember the company was attempting to defraud the government from the very start. Bob can tell you about that in some more detail, but the company used radiator sealant when they put the nozzles through tests. The quality assurance representative didn't know they were using radiator sealant.

Bob, do you want to expand on that a bit?

What I am trying to say, Senator, I don't think that the quality assurance system necessarily broke down. We have reason to believe that these were inspected. They were not inspected as well as they could have been. This ball works off of this handle here. It is the defective part, it is buried in the nozzle. You have to put it on a pressure gauge to test it.

Senator ROTH. I am confused. I realize that this was a deliberate effort to defraud the government. In many cases, that is the situation. What confuses me is that here you have a nozzle where 70 percent of them did not work the first time and yet government failed to discover that fact.

Mr. VANDER SCHAAF. That is correct.

Senator ROTH. Whether that was intentional or otherwise, it seems to me that our quality assurance program should have picked that up.

Mr. VANDER SCHAAF. I wish it had. I can't respond, but believe me, the company attempted to defeat the quality assurance program that was there. That is going to happen from time to time.

Senator ROTH. Mr. Koons, would you like to expand?

Mr. KOONS. The contractor in this case, as Mr. Vander Schaaf has stated, used many methods to hide the leaking problem with the nozzle. All the quality assurance representative was required to do was to check this nozzle in a closed position at 100 pounds per square inch of water pressure and see that it didn't leak. He did that.

Senator ROTH. Let me ask you a question. The quality assurance man, is he a government employee?

Mr. KOONS. Yes, he is.

Senator ROTH. Is he there full-time or part-time, or does he come on inspection?

Mr. KOONS. He was an itinerant. He would come as needed to inspect lots before they were shipped.

Senator ROTH. As a quality assurance inspector, does he have any responsibility, really, to make certain that the nozzle worked as the contract specified? It appears to be a very limited requirement.

Mr. KOONS. The specifications in this case were limited, although the quality assurance representative is permitted to do whatever he feels is necessary to insure that the product works.

Senator ROTH. It seems to me a pretty simple matter. The purpose of buying a nozzle is that it works effectively. Wouldn't that be the purpose of quality assurance, to see whether or not this nozzle would work as required under contract?

Mr. KOONS. He did what he was required to do through the contract specifications.

Senator ROTH. What was that?

Mr. KOONS. He did what he was required to do through the contract specifications. It did not leak. There were instances when some of the nozzles did leak, and we had testimony during trial from company employees that he did reject nozzles that leaked.

Senator ROTH. It just seems to me on the surface that there is something wrong with the system. Here we have a government employee who goes in, purportedly for purposes of quality assurance, and he makes what sounds like a relatively superficial review.

Mr. KOONS. He also conducted other tests regarding dimensional properties in the nozzle, but that was all he was required to do.

Senator ROTH. I understand that Mr. Schweitzer was also convicted for improperly manufacturing a valve for the F-4 aircraft. Did the government accept these as meeting contract specifications?

Mr. VANDER SCHAAF. Yes, the government did accept these as far as I know. In this case, a Tech Sergeant picked this up. The valve was oversized, and when he tried to fit it in its position under the ejection seat, it didn't fit properly. In addition the valves are defective on the inside, so they would not have worked. Fortunately, none of those were ever installed. We caught that one before they were installed.

Senator ROTH. It is my understanding that in the case of the valve, the quality assurance representative only had eight of the 16 pages of the contract. Was that adequate information to properly interpret the requirements of the contract?

Mr. KOONS. Yes, it was, for his purposes regarding this valve. Mr. Schweitzer represented on numerous occasions, both through documents and verbal representations to government representatives in the quality area, that he was buying this valve from an approved source in California and certified to that fact.

Based on that requirement and those representations, all the quality assurance representative's responsibilities were fulfilled. All he had to do, basically, was to make sure that we were getting the number that we were supposed to get from Mr. Schweitzer.

Senator ROTH. The information I have is that there was some critical information on the missing pages.

Mr. KOONS. Yes, but it wasn't the quality assurance representative's responsibility to inspect this valve. Because it was an OEM part, original equipment manufacturer part, it was only his responsibility to sign off on the shipment document.

It was the contractor's responsibility to certify that this is the part that the government wanted to buy, and the contractor represented that they were buying it from an approved source in California.

Senator ROTH. It is my understanding that the valve was not even of the right size. It didn't meet the specifications. Again, our system seems to be ineffective.

Mr. VANDER SCHAAF. Senator Roth, our system is very, very dependent upon the honesty and integrity of the contractors. We accept these certifications all the time when we purchase equipment. Only in certain high risk areas, such as nuclear propulsion, for example, where we have certain equipment that we watch very closely and are certified all the way, can we afford to put the kind of controls in place that it would require to ensure that every single part we are buying meets the performance criteria.

Senator ROTH. I understand. You would have so much red tape and paperwork that it would be prohibitive.

Mr. Chairman, do you have any questions?

Senator NUNN. Yes, just a couple of general questions, not getting into specific cases, but I am interested in the organization of the Department of Defense in dealing with these kinds of cases.

Do you consider that the IG's office has exclusive jurisdiction over this, or does every element? For instance, the services, they have their own inspector force. Do we have a lot of different checks and balances in the system?

Mr. VANDER SCHAAF. Yes, I think we have a lot of checks and balances.

[At this point, Senator Sasser entered the hearing room.]

Senator NUNN. Could you sort of outline those for us?

Mr. VANDER SCHAAF. I will be happy to. We have a system for reporting these cases when they occur. There are really two systems. There is the one that the Senator mentioned, which is the government/industry system sponsored by the logistics commanders, and it works throughout the logistics system in the Department.

In addition my office has a system of Inspector General Alerts, which we distribute through the Inspector General community. They double-check to make sure that the troop units throughout the Department are made aware of these defective products.

It works both ways, and all elements of the Department have to plan—from troop units, to maintenance depots, to air bases. There is almost no activity or function that should be exempt from the kinds of notifications that have to be made when we find defective parts.

Senator NUNN. So all the way up the line there is a quest for quality in the product, and they are tested by every element?

Mr. VANDER SCHAAF. I would say yes there is a quest for quality, yes, up and down the line. Whether we always get it and whether the system works is something else. You are going to have testimony from the Navy this morning about this nozzle. They made an attempt to get this nozzle off of ships, and they obviously didn't get it off of all the ships. I think that they will admit that. So the system doesn't always work.

Senator NUNN. We will hear from them on that point, but let me ask you. Is there a need for a better labeling system so that when you do have defective parts, you can trace them more readily?

Mr. VANDER SCHAAF. I think that we can trace the parts that are of high value and that are numbered and have serial numbers, and that sort of thing. When you get down to a part like a bolt or a spring, a non-unique part, then we cannot trace those items except in very limited cases. That becomes a difficult situation.

I don't know what it would cost, Senator, to put in place a system to do that.

Senator NUNN. It would be counterproductive.

Mr. VANDER SCHAAF. Yes.

Senator NUNN. Talking of counterproductive, I have heard contractors time and time again complain that they have more inspectors out there in their plants than they do workers.

This is a balance that is very hard to achieve in this area, is it not? You are striving for quality. You are trying to prevent defects. You are trying to get the right costs. You are trying to monitor.

The real question is: Do we have any kind of cost gauge on how much the Department of Defense spends in this monitoring effort?

Mr. VANDER SCHAAF. I think that we probably spend enough. Frankly, I don't think that you can inspect quality into these products. I think that you have to take the certification of the contractors. They have to ensure that their systems work properly to produce it.

If you get a cheater, then you have a different problem. We have enough checks to kind, if you will, keep the lid on the cheaters, but we are never going to catch them all right from day one, nor prevent this from ever happening.

This business of selling armies bad products has probably been going on as long as we have had armies. I don't see us preventing this, or putting a 100 percent stop to this. Hopefully, we can reduce it.

We can investigate those contractors who participate in this. They tend to be small contractors who get in trouble, because they can't produce a part to the specifications that they bid on. Then instead of coming back to the Department of Defense and seeking help, which we can provide them on their manufacturing problem; they decide to ship it anyway, because it is going to cost them more money to do the job properly. Then they have committed a crime.

It has gone from a production problem and a cost problem, to a criminal problem or a felony.

Senator NUNN. Then the cover up starts.

Mr. VANDER SCHAAF. Then the cover up starts.

Senator NUNN. Do you have any gauge about how much we spend in things like recalling these products, replacing the products; do we have any kind of measurement of time and money?

Mr. VANDER SCHAAF. No, but it is an enormous cost, sir. I have no way of defining the cost. I don't think that anybody in the Department does. I don't think that we could ever begin to do it.

What did it cost to look into all of those systems for The Spring Works whose springs had entered the Space Shuttle program? Somebody has to go and find them. It is difficult.

Senator NUNN. Do you feel as a member of the Inspector General Team that the military services give you full cooperation in this area? Do you have problems with the services?

Mr. VANDER SCHAAF. I think that we have gotten over most of the problems although we have had some problems in this area. I mentioned one case earlier, in which we went and learned a number of things from the Rusch Industries casting for the Phoenix missile.

We felt, in that particular case, that the program manager was more interested in getting missiles off the production line than he was worried that there might be an item in that missile that was defective and would keep his missile from working.

I frankly believe that we had some of that. He saw us getting into his program, preventing him from moving ahead with his production program and his ability to deliver missiles to the fleet.

Senator NUNN. Do your criminal investigators feel that sentences being meted out for these offenses are proportionate to the crimes committed?

Mr. VANDER SCHAAF. No, sir. They are unanimous in the fact that for the most part the sentences have been very, very poor, weak sentences. We have tried to do something about that. I have written to every United States Attorney. I would like to put a copy of that letter in the record.¹ We have written reports, and conducted surveys of all the sentences in the cases we have had. Typically the sentences are six months in jail, immediate release, and actually no jail time spent.

Senator NUNN. What happens if a ship, as Senator Roth mentioned earlier, catches on fire? A defective hose doesn't work, and we lose eight or ten sailors out there, do you believe the criminal laws would reach to manslaughter charges when there are intentional quality coverups, or even murder charges?

Mr. VANDER SCHAAF. If we had that kind of case, I suspect that the law could reach them.

Senator NUNN. Even perhaps second degree murder? Have you all looked at that aspect?

Mr. VANDER SCHAAF. We have looked at that aspect.

Senator NUNN. It seems to me that this ought to be looked at because that is bottom line in this. I think from the point of view

¹ See p. 160.

of contractors, even small contractors, if they realize they may be subject not simply to the charges—I suppose you are bringing charges under the fraud statutes and those kind of statutes, but also if something really goes wrong with one of these, and people lose their lives, they may be subject to even prosecution for murder or manslaughter, it might have some effect.

Could you look into that aspect as to the applicability of these kinds of laws?

Mr. VANDER SCHAAF. There is a lot of law on that, and I am not the lawyer and would not want to advise on third party liability law, and those types of problems.

Senator NUNN. Would you have your staff look into it and give us some kind of written opinion on it?

Mr. VANDER SCHAAF. Yes, Senator.

Senator NUNN. Thank you, Mr. Chairman.

Senator ROTH. Senator Levin.

Senator LEVIN. What about the civil side. What are the civil damages that one is open to for a defective part?

Mr. VANDER SCHAAF. One is open to recover all the costs that the government incurred in buying the part and conducting the investigation to find out if the part is defective, repairing the parts, removing the parts from the equipment, and so forth. We have attempted, on occasion, to seek civil recoveries in certain cases.

[At this point, Senator Sasser departed from the hearing room.]

Senator LEVIN. The cases that we are talking about this morning, have we sued civilly the company or the owners for all of our costs in retrieving parts, and getting new parts?

Mr. VANDER SCHAAF. No, we haven't. I believe, Alchemy is bankrupt and out of business.

Senator LEVIN. What about the other company; is the other company bankrupt?

Mr. VANDER SCHAAF. There is a civil investigation still open on The Spring Works, the other company.

Senator LEVIN. Are the owners personally responsible in this kind of a case? In the case of a fraudulent situation, are they personally responsible civilly?

Mr. VANDER SCHAAF. I believe that they would be, Senator. In these two cases, the owners personally and substantially participated in the delivery of defective products. They knowingly participated in the activity.

Senator LEVIN. Have we gone after the owners civilly for all of our damages?

Mr. VANDER SCHAAF. We have not. In the case of Alchemy and The Spring Works we are pursuing civil remedies. However, at this time I do not know whether they will go all the way through the justice system.

Senator LEVIN. I am not talking about the corporation, which you said went bankrupt. I am talking about the owners of the corporations individually.

Mr. VANDER SCHAAF. I think that it is still under consideration in The Spring Works case. We have not done so in the Alchemy case.

[At this point, Senator Nunn departed from the hearing room.]

Mr. KOONS. In the Alchemy case, as part of the criminal sentence, it was taken into consideration what the Department of Defense was defrauded, and he was ordered to make restitution in the amount of approximately \$433,000.

Senator LEVIN. Would you give us a report on the extent to which civil damages are sought for all of the consequential damages, if my memory is correct, that result not just triple the cost to the government of a part, we are talking about the cost of inspecting, investigating, ripping out, replacing. Those are very large sums of money.

Could you give us an assessment of the extent to which civil damages were sought against individuals who owned companies? I am not talking about the companies, I am talking about the individuals, where there is fraud? Give us some kind of an idea as to whether or not there is extensive use of civil actions against individuals.

Mr. VANDER SCHAAF. I can give you an idea right now. It has been very, very minimal.

Senator LEVIN. Why isn't it more extensive?

Mr. VANDER SCHAAF. I don't know. You would have to ask the Justice Department.

Senator LEVIN. Why don't you ask the Justice Department for us?

Mr. VANDER SCHAAF. I will.

Senator LEVIN. We ask the Justice Department lots of other questions.

Would you give us an estimate as to the percentage of the defects that are found by the quality assurance people or otherwise that are fraudulent, purposeful, willful and intentional? Give us a guesstimate as to whether that is 1 percent, 5 percent, 25 percent. Do you have any idea?

Mr. VANDER SCHAAF. It is down to the 1 to 5 percent, I am sure, but I don't have an exact figure. I don't think that the quality assurance people even know. When they find a defective part during an inspection process, they really don't have an idea if it might be intentional unless someone comes forward and starts talking, an employee or some other knowledgeable individual. A supplier, for example, might come forward. Other than that, there is no way, by just looking at the part and finding it defective to understand if there is any intent behind the defect.

Senator LEVIN. Sometimes, though, don't the circumstances and the facts speak very loudly as to intent? Couldn't juries reasonably find that the material provided is so different that no reasonable person could not have known that it was willful, purposeful, intentional?

Mr. VANDER SCHAAF. Absolutely.

Senator LEVIN. All you know is that there is a defect. You don't have any whistle blower in that case, so all you have are the circumstances.

Mr. VANDER SCHAAF. If the circumstances, for example, involved the wrong material, that is kind of self-evident.

Senator LEVIN. But are there some cases where the Government has been successful in prosecution based on circumstantial evidence?

Mr. VANDER SCHAAF. Somebody must have attempted that. It is possible the wrong material ended up in the bin that went through the manufacturing process. It is not likely, but we would have to go look. We would still have to try to establish intent, but those would be strong indicators of intent.

We have all manner of documents distributed to businesses, Senator, that are indicators of fraud in this business. We have a publication that my office put out on fraud awareness concepts for the Department of Defense quality assurance personnel. We have had every quality assurance person in the Department, I think, go to school on this subject.

Senator LEVIN. The question is, you would agree that you don't necessarily have to prove intent with the whistle blower or with direct testimony, you can also prove intent sometimes indirectly through the circumstances that exist.

Mr. VANDER SCHAAF. If you wanted to proceed in the case civilly, it would be my understanding. You could not proceed in the case criminally, where you would have to prove intent beyond all reasonable doubt.

Senator LEVIN. You are saying, in order to prove that, you have to have either direct testimony or an admission to prove that?

Mr. VANDER SCHAAF. I will ask the two investigators if they know of any cases that we have gotten through the system without having direct testimony.

Ms. OWENS. I am not aware of any.

Senator LEVIN. Without an admission, or without someone saying that that person did that on purpose?

Ms. OWENS. I am not aware of any, no.

Senator LEVIN. What are the rules about reporting back to the DOD? What obligations are the primes under, when they find defects in parts, to notify the DOD of the defects?

Mr. VANDER SCHAAF. What obligation are they under?

Senator LEVIN. If any. Do the primes have obligations to tell us that, hey, this subcontractor submitted a defective part. Would you outline what those obligations are?

Mr. VANDER SCHAAF. The obligation, I think our obligation and their obligation is to go back and check that subcontractor. The government will, from time to time, go back and check the sub to make sure that the problem has been corrected. We would also get involved to by investigating to see if there is intent on the part of the subcontractor to defraud us.

Senator LEVIN. My question perhaps wasn't clear. Is there an obligation on the part of the prime contractor to notify the DOD when the prime becomes aware that subcontractor has supplied defective parts?

Mr. VANDER SCHAAF. Yes, there is, and they do that through the GIDEP program, the government/industry program.

Senator LEVIN. Tell us, is this any defect, or must there be evidence of purposeful, willful conduct?

Mr. VANDER SCHAAF. It is any defect that could cause the system not to work the way it is supposed to work.

Senator LEVIN. Even if they catch it before they supply the end product to the Federal government?

Mr. VANDER SCHAAF. There, I am not sure. There might be a moral requirement to do so, but I would think that they would probably correct that on their own, and might not tell the contract administrating officer that that situation happened.

Senator LEVIN. How about if they discover something that they believe might be willful, but they catch it, do they have to report their suspicions to the government?

Mr. VANDER SCHAAF. The item didn't enter the government system yet?

Senator LEVIN. Correct.

Mr. VANDER SCHAAF. There is no legal requirement to report that suspicion to the government.

Senator LEVIN. Even if they have reason to believe that it is purposeful and willful?

Mr. VANDER SCHAAF. Many of our contractors have signed up to ethical practices, that would, at least in my opinion, cause them to tell the government about that situation. They should come forward. I think that many of the contractors who signed up to those practices would come forward.

Senator LEVIN. There is no provision, either law or in our contract, that requires a prime to notify us if there is reasonable belief that the provision by a subcontractor of a defective part was willful and purposeful, provided they caught it before they supplied it?

Mr. VANDER SCHAAF. That is right. There is no legal obligation there.

Senator LEVIN. Should there be where the prime has reason to believe that it is fraudulent?

Mr. VANDER SCHAAF. I would hope that he would honor the moral obligation in that case.

Senator LEVIN. My question is whether there should be a contractual or legal obligation?

I am not saying that there should be. I am asking you.

Mr. VANDER SCHAAF. I would say, probably, no. I don't know if it would do much good.

Senator LEVIN. Do you know any examples where primes have used subcontractors who have been debarred?

Mr. VANDER SCHAAF. There have been examples, yes. I could go back and probably find you examples.

Senator LEVIN. Within the last three or four years?

Mr. VANDER SCHAAF. I would have to go back and check with the procurement community. We will check the records and see if we have had some cases. Those cases would occur where a debarred company restructured itself and the individuals ended up with a different name. However, the same product and the individuals are the same, and they get back in the system.

Senator LEVIN. Let us know, would you, some examples in recent years where you have found that primes have used subcontractors that have been debarred?

Senator ROTH. If the Senator would yield.

I think that part of the problem there, and this was discussed prior to your being here, as I understand it is that debarment does not apply to subcontractors, although a proposal has been made to attempt to remedy that.

Senator LEVIN. I understand that, but I think he testified this morning that he didn't know of any examples where the debarred subcontractors continued to be used by primes.

I thought that this was what you had testified earlier today, and that is what I was pressing you on.

Mr. VANDER SCHAAF. I think there may have been examples where this may have happened. I don't think that it has ever happened knowingly. I don't think that we have ever had an example where a prime contractor has knowingly used a debarred subcontractor.

Senator LEVIN. Could I have another few minutes?

Senator ROTH. We do have a number of witnesses, so we ought to be moving on.

Senator LEVIN. Just one short question.

Senator ROTH. Sure, go ahead.

Senator LEVIN. You talked about the quality assurance representative on that valve just looking at it when it was in a closed position, I believe. Then you made reference to the contract specifications. Do the contract specifications set forth what the quality assurance program is; what the quality assurance representative will do? Is that all set forth?

Mr. KOONS. No.

Senator LEVIN. I didn't quite understand your testimony, Mr. Koons, when you said that the quality assurance representative only looked at it in the open position or closed, whichever it was, because that is all that the specifications required him to do. Would you tell us what you meant by that?

Mr. KOONS. That is correct. The specifications, as outlined on the drawings, only required him to check the nozzle functionally.

Senator LEVIN. Those are contract specifications?

Mr. KOONS. The drawings become a part of the contract, and they are the technical specifications for the contract.

Senator LEVIN. The contract then, by incorporation, tell the quality assurance representative what he should check?

Mr. KOONS. Yes.

Senator LEVIN. We don't have any other directions to him as what he should check?

Mr. KOONS. There is also provided in the contract a quality assurance system for the contractor that he has to maintain. The QAR will also verify that the contractor is maintaining the quality assurance system as called out in the contract. The QAR in this case did do that. In other words, the contractor has to do his own testing, his own sampling.

Senator LEVIN. What determines whether our representative will look at the closed position as well as the open position? What tells him to do it or not to do it, does he have a manual, or is it common sense?

Mr. KOONS. In this instance, it was required specifically that that was what he had to do. They have a numbered manual for the QARs that they are required to follow. I believe I stated before, they are not limited in their test to just the closed position, but that is what he was required to do.

Senator LEVIN. Should he have checked the other positions under that manual?

Mr. KOONS. He was not required to do it. The manual only says if the QAR is satisfied.

Senator LEVIN. I got that, but should he have checked the other position under the manual?

Mr. VANDER SCHAAF. He probably should have, but he probably had physical limitations that prevented him from doing it. If you send a stream of water out of this nozzle at 150 psi, you have to find 100 yards of open space, or something of that magnitude, to go test it. You run into physical limitation right away, so you take an easy route there, Senator.

Senator LEVIN. Thank you.

Senator ROTH. Thank you, Senator Levin.

[At this point, Senator Levin left the hearing room.]

Senator ROTH. Let me go back to the earlier line of questioning of Senator Levin, and I would like to ask this of Ms. Owens.

To your knowledge, are some defense contractors still doing business with Spring and Wire Designs even though Mr. Brown and Mr. McCullough have been debarred and the company has debarment proceedings pending against it?

Ms. OWENS. Yes, sir, they are.

Senator ROTH. Are those contractors aware that they are doing business with such a company?

Ms. OWENS. I would assume they are because of the suspension information. The debarment has just occurred. They were aware that they were under suspension.

Senator ROTH. Are you aware if they took any steps to assure quality performance is satisfactory, knowing that they are dealing with a company that has a negative record?

Ms. OWENS. I don't know.

Senator ROTH. Let me ask you this, Mr. Koons, or you, Mr. Vander Schaaf. Going back to the inspectors, the quality assurance inspectors, do you have any basis for saying how well qualified they are by training or background or experience?

We have found in a number of areas that we set up a procedure, and then we find that the people who are put in it are just basically not that well qualified to perform the kind of technical work required.

Mr. VANDER SCHAAF. We found some weaknesses in that program as well from some of our audit work. I will make summaries of those audit reports available for the record. I believe the Committee already has the full copies of the audits. It is hard to quantify that kind of thing. These jobs tend to be low paying jobs. They tend to have to visit a lot of facilities. They work on an itinerant basis. They are not there all the time.

It can be a difficult job. If you don't have the right physical equipment to test something such as a casting like this, other than to count them and measure their dimensions, it is difficult for the QARS to do a complete job.

Senator ROTH. I am not sure that you are the right individual to ask this next question, but I would be interested in any comments you would care to make. One of my concerns, as we go through this government procurement, particularly in the military area, is that we set up all these requirements, controls, checks, you name it, and it doesn't seem to work all that well.

It is my understanding that at least some individuals on the Packard Commission sometime ago suggested that we should try to be more like the private sector and buy whatever the item is from the prime contractor, and hold him wholly responsible, and not divide responsibility as we do through getting involved in certifications and government inspections at every level. Do you have any comment to make on that?

Mr. VANDER SCHAAF. Yes, I support those recommendations. However, I don't think if you want to buy all the parts from the prime. There are things that our primes don't produce. It is an easy recommendation to make. We ought to hold the prime responsible for the end-product, and I think we generally hold the prime responsible.

Senator ROTH. That is not what I am saying. I am saying that you buy it from the prime contractor, and it is his from thereon, the same as when you buy a car, you don't run up there and personally inspect or send your auditors to look the process of manufacturing that car. What I am saying is that there are at least some who indicate that we have made this such a mish-mash, such a division of responsibility between the prime and the government, that we do not get the quality desired, and all we do is run up costs.

Mr. VANDER SCHAAF. Again, it is a difficult question to answer, Senator. I don't know if there is a single answer. You have to look at the cases here. For some of these items, we could hold the prime responsible, but in many cases there is no prime. We are buying these as spare parts, and the supplier is, in fact, the prime. The original manufacturer of the weapon system, if we went to him we wouldn't be able to break the part out. He would charge us substantial overhead and other costs associated with him going out to buy the part, as opposed to the government buying directly. Then we get into the problem of the overpriced spare parts.

Senator ROTH. I have two more questions, and then we will want to go to the next witness. Ms. Owens, these are directed to you.

During your investigation of The Spring Works case, I know that you were in contact with a number of defense contractors that had purchased springs manufactured by The Spring Works. Could you describe the kind of cooperation that you received, and whether it varied from company to company?

Ms. OWENS. There was a great disparity between the amount of cooperation I got from some contractors and others. Some contractors nearly made the case for me. They had done all their homework. They had complete traceability on parts. They opened their books. They did enormous amounts of research and were very, very helpful.

Others were not so helpful. You had to sort of beg every step of the way, and in some instances it was impossible to get some information from them.

Senator ROTH. Those companies that refused to cooperate, were any follow through steps taken?

Ms. OWENS. It wasn't particularly a refusal to cooperate, but it was minimal cooperation. They did the least amount that they could.

Senator ROTH. To what do you attribute this difference.

Ms. OWENS. In some instances, I could say that it was company policy. In some instances, they don't have some of the records. They don't maintain records the same way that other companies do.

Senator ROTH. I want to thank you, Mr. Vander Schaaf, Mr. Koons, and you, Ms. Owens, for being here. We will leave the record open for a few days in the event we have any additional questions.

At this time, I would like to call Rear Admiral Abele, the Deputy Commander of Naval Supply.

Raise your right hand. Do you swear the testimony you will give before the subcommittee will be the truth, the whole truth, and nothing but the truth so help you God?

Admiral ABELE. I do.

Senator ROTH. Thank you, Admiral Abele.

**TESTIMONY OF REAR ADM. ROBERT B. ABELE, SC, USN, VICE
COMMANDER, NAVAL SUPPLY SYSTEM COMMAND**

Admiral ABELE. Senator, with your concurrence, I will not need the entire statement I prepared. It has been submitted for the record.¹ I would, however, like to touch on some of the highlights of it, particularly having heard Mr. Vander Schaaf's testimony because I think some of it is germane as to how the Navy goes about trying to ensure quality products for our sailors, as well as some of the follow-on to the Alchemy fire hose nozzle case.

As Mr. Vander Schaaf testified, we in the Navy are very concerned about quality and about the quality of the materials and products we give our sailors. We essentially believe that there are four fundamental elements to getting a quality product.

The first, is, we, obviously, need a good, enforceable technical specification to put in the contract, to tell the vendors what it is we want.

The second part of the process is selecting a vendor who is capable, reliable and qualified.

The third part is having a compliance system that will give you some reasonable degree to assurance that the vendor is going to comply with the contractual requirements.

The fourth, the safety net, if you will, is some kind of a quality feedback system that will provide you feedback when bad parts do, for some reason, get into the system.

With regard to the first element, the technical specifications, the Navy is responsible for developing the technical specifications for all the material we use, whether or not we do the actual procurement of the material.

In that regard, as an example, I would point out that about 80 percent of the material the Navy uses comes from the Defense Logistics Agency.

Technical specs for the item itself can range anywhere from a part number or a catalogue description for common off-the-shelf items, to a very detailed, complex set of drawings and technical specifications for critical and complex applications.

¹ See p. 117.

The quality program requirements would delineate in varying degrees of stringency the acceptance requirements for the material involved. The stringency that we put into our acceptance requirements is directly related to the cost, the complexity, and the criticality of the item. For example, for our nuclear reactor spare parts, the Navy has an extremely intensive program for ensuring that we get quality parts. It begins with upfront vendor qualification and survey requirements, extensive technical and quality assurance surveys, and an intensive quality surveillance program and inspection, both at the vendor's plant and when we physically receive the item.

These efforts have been very successful in getting us quality materials for our submarine nuclear reactors. I would point out, though, they are very labor intensive, and they are very expensive. Thus, we apply them only to a very select category of material where we feel that kind of management is necessary.

Awarding to a capable vendor is the second part of a good quality program. In this regard, our contracting officers use several tools to ensure that we get a good vendor, such things as upfront vendor surveys, first article testing, production lot testing, and other devices are employed to ensure that we get a good capable vendor to give us our material.

In that regard, the Navy has, over the last several years, both intensified and expanded efforts to gather performance data on the vendors we deal with and to make this data available to both our technical and our contractual personnel during the vendor evaluation process.

Quality has to start in the procurement process. As Mr. Vander Schaaf so aptly pointed out, you can't build it in by inspection after the product has been made.

Compliance with requirements of the contract is accomplished by various inspections done normally by the administering contract review office. Inspection requirements, again, as I mentioned earlier, vary based on the cost, complexity and the criticality of the item.

The inspections range from review and approval of the contractor's QA and manufacturing process to actual hands-on testing and inspection of the material itself. Inspection of the material itself varies from a simple quantity count to subjecting the item to a very complex destructive test carried out at an independent testing laboratory. However, for the overwhelming majority of the material we buy, we rely on the vendor's compliance with the military standards imposed in the contract.

We think that the system has been both effective and successful. It has not been fool-proof.

The last of the fundamental elements in getting good quality material is some procedure for reporting defective material, and I would like to go into a little bit of detail because it is the keystone of our feedback system. It is our safety net when the rest of the system, in one way or another, falls through, or when we get a dishonest vendor.

This is our quality deficiency reporting, or QDR system. When our personnel discover a defective item in the fleet, or at one of our shore activities, they complete a standard QDR form and forward it

to one of various screening agencies within the Navy. For much of our supply system material, this is the Fleet Material Support Office, or FMSO, as it is called. I will concentrate on that one because the detailed procedures vary from screening activity to screening activity, but FMSO is the one that was involved in the fire hose nozzle case.

When FMSO receives the QDR report from one of our activities, they will, in turn, forward it to the action activity, e.i., the activity within or outside the Navy, normally, who procured the material in the first place. That activity is then charged with investigating and returning to us the information necessary for ultimate disposition of the material.

During the QDR investigation, normally efforts are taken to identify what the problem is, identify the original contractor, review the procurement documentation, and so forth, so that we can take corrective action, both with the current contract, as well as any future ones.

Based on the results of the QDR investigation, two actions are normally taken. The first is the response back to the originator of the QDR, providing him the results of the investigation. If his complaint was validated, he will also be provided disposition instructions for the defective material.

Second, if the material is, in fact, defective, and it has been determined that it affects other material in the system, FMSO issues defective material summaries to all Navy stocking points and user activities, with instructions to screen the Navy stocks, freeze and segregate the items, ship them to a designated test site, or dispose of the defective material as the circumstances dictate.

DLA takes similar actions for their material.

In those cases where we can't make an immediate judgement, FMSO will send out a flash alert message telling activities to freeze the material in place, and remove such material from stock. Individual activities, in the past, have been responsible for acting on the information provided in the bulletins.

If fraud is suspected, the information turned up during the investigation will be turned over to the appropriate government investigating organization.

With respect to the Alchemy fire hose nozzle, the nozzle was an item managed by the Defense Construction Supply Center, a DLA activity. DCSC, in buying the nozzle, used a standard Navy drawing, which was developed in 1967. Since that period of time, the only problem we have ever had with a vendor providing the material under the technical specs we provided is Alchemy.

Using the standard drawing, DCSC awarded three contracts in the period of 1981 to 1982. We first became aware of the potential problem when one of our fleet units, the USS *Fulton*, sent in a quality deficiency report, or QDR, to FMSO in October of 1982.

In accordance with the procedures, FMSO forwarded the QDR to DCSC for investigation and resolution. In February of 1983, DCSC advised FMSO of potential quality problems with the nozzle and requested action to screen our inventories. Within several days, FMSO had released a message to all Navy activities, including the fleet commanders, directing them to either suspend the material, if

it was in use, or if that material was in stock, to freeze it and segregate it so that it wouldn't be issued.

In March 1983, DCSC provided FMSO with disposition instructions, which essentially said to forward all the nozzles you have to DCSC-Columbus for their disposition. FMSO, in another message released that month, provided that information to our users.

As I previously indicated, the QDR system assumes that all Navy activities will respond to the various alert messages sent out by the screening activities. In hindsight, and as identified with the help of your staff, this was an erroneous assumption.

Due to your initial interest in the nozzle, we prepared a message to all of our Navy units asking them again to take a look and make sure that there were no nozzles in use or in stock, and that if there were, they be removed from use and segregated.

As Mr. Levin testified, he very handily found one of the nozzles on the USS *Nassau* in a repair locker during his visit to our ships down in the Norfolk area.

We are still accumulating Navy-wide data. Our results to date indicate that our original notification in 1983 to turn in the nozzles was not fully complied with. As of this morning, we had received notification, based on our message of last month, that some 375 nozzles were still in the system, approximately 133 of these were on-board ship, 52 of them in use, and the others in staterooms. The remaining nozzles were at various shore activities around the country.

We will provide your staff with the final count within the next two weeks.

This, obviously, is a big hole in a system that we thought was working well. I would like to point out that the QDR system did work well in that it identified defective material, it initiated action within the system, to take action to find out if the material was bad and it was the basis upon which the DCIS took action for criminal proceedings against the contractor.

It fell apart in our own internal Navy in-house screening of the stocks, and in our presumption, that everyone would turn in the defective items. It is similar to the case with General Motors when they issue a recall, and assume that everybody is going to bring the car in. In this case, they did not.

To ensure future compliance with these directives, however, we have put a fix into our system, a closed loop tracking system for all Category One items, which are defined as those that may cause death, injury, severe occupational illness, would cause loss or damage to major weapon systems, would directly restrict the combat readiness capabilities of the using organization, or would result in a production line stoppage.

The QDR submitted for the Alchemy nozzle, by the way, was a category one.

The changes to the QDR system will ensure, in fact, they will force positive feedback by all recipients of the suspected material.

Senator ROTH. Let me ask you. How many items do you have in that category now?

Admiral ABELE. The current category one items, I believe number only about 39 cases actually outstanding at the moment. We will screen those, using this new closed loop system.

Senator ROTH. Please proceed.

Admiral ABELE. To further emphasize the defective material program and publicize the consequences of not complying with it, the Commander of the Naval Supply Systems Command has sent a personal message to all fleet and type commanders, describing the fleet's lack of compliance specifically in the case of the fire hose nozzles, and requesting renewed emphasis on the process.

We are also preparing articles for various Navy publications which reemphasize the program and describe the impact that the lack of action on a QDR notification can have on a ship or an individual. I believe these types of actions will be effective in closing the loop.

Quite frankly, I must congratulate your staff, because they have been a big help in plugging a hole that we didn't know existed.

In summary, Senator, we order millions of items from other government agencies each year, and we spend billions of dollars buying spare parts from private industry for Navy use.

As Mr. Vander Schaaf stated earlier, every indication we have is that the vast majority of the vendors are honest, dedicated, conscientious individuals who deliver quality products that meet government specs or standards.

For the few contractors delivering substandard products, the Navy has a system of reporting and removing these items from stock and user commands. This system has proven to be effective over the years. Where deficiencies have been identified, corrective actions have been taken. Again, your staff's assistance in this one plugged another hole.

There is no question but that the Navy must be sure that it receives quality products when we go to the marketplace. In particular, those products affecting the health and welfare of our Navy men and women, both afloat and ashore, are critical concerns to us. Our job is to ensure that they get the kind of quality product they need, and I assure you that this is our goal.

Mr. Chairman, this concludes my testimony. I will be glad to answer any questions you have.

Senator ROTH. Thank you, Admiral.

Let me go back. As I understand it, there are 39 other cases in category one, and those involve items that could imperil the lives of our men and women in the Navy.

Admiral ABELE. Yes, sir.

Senator ROTH. Do you have a list of the items involved in those 39 cases?

Admiral ABELE. I do not have a list with me. I can get you one, Senator.

Senator ROTH. Could you illustrate what they are, for purposes of the record?

Admiral ABELE. I do not have a specific list of the items, Senator. I will have to get that.

Senator ROTH. Let me go back for a moment to the question of the nozzles, on which you are going to submit the figures, as I understand. What kind of ships were these nozzles used on?

Admiral ABELE. They were used on just about every category of ship we have in the Navy. They were used on destroyers, mostly our larger ships. On smaller ships, such as the Stark, for example,

we use a smaller size fire nozzle. They would be used on amphibious ships, on aircraft carriers, on store ships, cruisers.

Senator ROTH. So they are located, if I understand what you say, throughout our fleet, and they could be in places such as the Persian Gulf, as well as at home.

Admiral ABELE. They could have been, yes, sir.

Senator ROTH. Let me ask you, do you know where these ships are located that contain these nozzles?

Admiral ABELE. The ones that are still outstanding, sir?

Senator ROTH. Yes.

Admiral ABELE. I don't know specifically today where they are. All, of course, have removed the nozzles from use based on the last message that we sent out.

Senator ROTH. Let me ask you, you say that the loop was not closed, why wasn't there a follow through on your earlier 1983 message on Alchemy nozzles?

Admiral ABELE. As I have previously mentioned, the system was initially set up under the assumption that everybody would react to the messages when they went out. I, quite frankly, am surprised, on a category one message, that there wasn't more reaction. We had the apparent hole that turned up when your staff started probing this.

I find it hard to believe that any individual ship or shore station would not have checked their fire hoses, particularly that kind of an item. I can't explain why they did not.

Senator ROTH. What kind of a danger would that create if these nozzles didn't work on a Navy ship?

Admiral ABELE. My understanding of what happened with the nozzle, what would happen to it was severalfold. One was that the ball could and it apparently did in fact, disintegrate under pressure, which would have meant that you would have just a constant, continuous stream of the fire hose and be unable to turn it off. I understand that there were some parts of the nozzle that did not meet the strength requirements that they should have.

In short, it could, I think, have posed a potential of impeding the ship's capability to fight a fire.

Senator ROTH. In other words, if I understand it, let's assume that a ship was in the Persian Gulf and attacked, these nozzles would not necessarily even turn on or work so that you could have had a very serious situation in the event the ship had been attacked by a missile or otherwise.

Admiral ABELE. Technically, Senator, I am not sure that they wouldn't turn on.

Senator ROTH. My understanding is that the problem with them, and the reason that they were 70 percent defective, is that some wouldn't turn on and some wouldn't turn off.

Admiral ABELE. If they wouldn't turn on, that obviously would pose a significant danger to any ship of almost any kind.

Senator ROTH. It seems to me that it is critically important that we ensure that the ships, in the Persian Gulf in particular, follow through in tracking down these defective nozzles.

Admiral ABELE. Yes, sir, we have.

Senator ROTH. Let me ask you. What happens to these nozzles, these defective parts? There is always the concern that they will

come back and be sold as scrap or something, and find their way again into the channels of commerce.

Admiral ABELE. So are we, sir. In the case of the nozzle in particular, based on direction from the Defense Construction Supply Center, all of them that we had before have been shipped to Columbus, Ohio. I believe that they will hold them while the litigation is going on with Alchemy. I don't know what DLA's disposition is going to be.

Normally, when we have a defective item, the customers are all told to hold the material until we find out what is wrong with it. Then, depending on what the problem is, whether there is any fraud or legal action being taken, the appropriate disposition instructions are given.

For example, in the case of the bolts, the Grade B bolts, which were mentioned earlier, my understanding is that all of those are going to be shipped to one of the Defense Logistics Agency activities, and literally melted down, because I would be willing to bet that if we sold them for scrap, some of them would find their way back into the system.

Senator ROTH. I would be willing to bet a few bucks that this would happen, too.

Let me go back. I understand that GIDEP sends out alerts to warn participants about possible problems with parts. I also understand that not all Navy Supply Centers are participating members of GIDEP. Is that true, and if so, why?

Admiral ABELE. My understanding, and I will confirm this for your staff, is that all our major procuring offices, both our inventory control points and all of our Navy Supply Centers, as well as our Navy Regional Contracting Centers, have been directed in the past, in fact as recently as three months ago, I believe, to ensure that they are participating members in GIDEP.

I told my staff this morning that they are to go out and make sure. We have a standing instruction from my command to all of our procuring activities that they are to be participating members of GIDEP, and they were reminded of this about three months ago.

I will not sit here and swear to you that they all have complied, and I will get back to your staff with that information.

Senator ROTH. We understand that many Navy components are not subscribers. For example, it is our understanding that the Naval Supply Center in Oakland is not a participating member of GIDEP. I take it that you find the information provided by GIDEP to be useful.

Admiral ABELE. Yes, sir.

Senator ROTH. Let me go back to the basic problem. Here you had a nozzle, as you mentioned, which you had been procuring for many, many years, so it was not at the edge of scientific technology. And of course, what we are really interested in is preventing this kind of situation from happening.

What went wrong, is it because there are so many procurements that occasionally a bad product slips through, or is there something wrong with our policy?

Admiral ABELE. I don't think that there is anything wrong with the policy, Senator. Using the four elements I discussed earlier, as I understand the case, there was a good spec, which had been made

for years. I understand that when DCSC let the contract, Alchemy had been a supplier previously not of his own product, but he was a vendor, a middle-man, if you will.

There was no reason for DCSC, and I am not intending to speak for DLA, but as I understand it, there was no reason for them to think that Alchemy was a crook or that he couldn't produce the product.

The test requirements that DCSC called out were standard and a mid-level quality program was imposed upon Alchemy, which is in accordance with all of the standard procurement and QA regulations and requirements.

Senator ROTH. Let me address that, because as Senator Nunn pointed out earlier, we get a lot of complaints that there are so many inspectors at contractors' plants that they really can't even proceed with the work. On the other hand, as we heard the IG testify, in many cases the inspectors do not seem to be adequately trained. Have we set up a system that in theory sounds good, but in practice is failing?

Admiral ABELE. I am into an area, Senator, where I am not an expert. DLA, the Defense Logistics Agency, does about 80 percent of the contract and inspection work for the Navy. I am not intimately familiar with the details of their operation. My own observations, I guess, would be, that I have to agree with Mr. Vander Schaff. I don't think we have too many inspectors.

My personal perception is that the variety of things that one inspector is expected to inspect and know in an area for which he is responsible, which might contain 20 different companies making things for DOD, that the issue of training and qualifications is a very difficult one.

For nuclear reactor spare parts, we have a special program with DLA to train their QARs. They undergo a very specialized, intensive training, and they have to be certified by the Navy before they can operate at a plant that makes nuclear reactor spare parts, for example.

That very intensive kind of training is not done, I don't think throughout the entire DCAS range, and I don't know what the cost would be to really do it either.

Senator ROTH. Let me go to the other side of the question. You heard the IG complain that the penalties attached to those who have deliberately sought to defraud the government have been not very, very heavy. Do you think that it would be helpful if there were special legislation adopted to increase these penalties where lives are at stake?

The suggestion was made by our chairman that it might be manslaughter, or even second degree murder. Do you think that these individuals who cheat the government and endanger the safety of our armed services, would be deterred by stiffer sentences?

Admiral ABELE. Personally, I would think so, sir. I don't know whether legislation is needed for that or just a change in the way the law is applied.

Senator ROTH. The problem that you get into in the prosecution of these cases is, if they don't involve many dollars, it is hard to get a lot of your prosecuting attorneys to want to take action. What concerns me here is that you have lives at stake.

What we are talking about in these cases is an intention to defraud the government for a few bucks. As we pointed out with these springs, they don't cost much. Do you think that it makes sense to not debar those who are found guilty of defrauding the government from doing business as subcontractors as well as prime contractors?

Admiral ABELE. I am not sure I understand, sir.

Senator ROTH. As I understand the current law, a contractor is debarred from doing business with the government, but he is not barred from doing business with a prime contractor. In other words, he isn't barred from being a subcontractor.

Admiral ABELE. My personal opinion would be, if he is not debarred from doing business with the prime, he should be. If we won't buy something from a contractor directly, I guess I would have to question why we would allow one of our prime contractors to use that contractor's material in something that we are going to buy ultimately.

Senator ROTH. It is my understanding that there is a proposed regulation to do just that, but it would exempt from that requirement or limitation those contracts under \$25,000. In other words, if a subcontractor does business of \$20,000 with a prime contractor, even though he has been guilty of defrauding the government, he can still do business. Does that make sense?

Admiral ABELE. No, sir.

Senator ROTH. Thank you, Admiral, for being here today. I apologize for the long delay. I would request that we get this information as rapidly as possible for purposes of the record.

Admiral ABELE. Yes, sir. Thank you, Senator.

Senator ROTH. Our next witness will be Mr. Alexander Savicki.

Please raise your right hand. Do you swear the testimony you will give before this subcommittee will be the truth, the whole truth, and nothing but the truth so help you God?

Mr. SAVICKI. I do.

Senator ROTH. Please proceed with your statement. If you can summarize it, it would be helpful. Your full statement will be included in the record.

TESTIMONY OF ALEXANDER SAVICKI, MACHINE DESIGNER, FORMER EMPLOYEE OF ALCHEMY, INC.¹

Mr. SAVICKI. My name is Alexander Savicki, and I am a retired machine designer. I started working in a machine shop at Bethlehem Steel Company 37 years ago. Since that time, I have worked on, supervised, and coordinated engineering design with almost all possible talents in the machine shop.

I worked for Alchemy, Inc., a small manufacturing company, owned and operated by Leo Schweitzer III, in 1982. I certainly never expected to end up testifying before a Grand Jury, or at a criminal trial, and now before a Senate Subcommittee.

I can tell you that working for Mr. Schweitzer wasn't like any other job I ever had. Alchemy made me nervous from the start. Mr.

¹ See p. 131 for Mr. Savicki's prepared statement.

Schweitzer was getting lots of DOD contracts, but he just wasn't equipped to handle them.

I spent much time at Alchemy working on two-and-a-half inch fire hose fog nozzles, which were destined for Navy ships. The nozzles I saw were simply not useable. The real reason the nozzles were not usable was that Mr. Schweitzer directed employees to take short-cuts and use patchwork solutions, even when I and others told him that things were not working out. He said that he needed a paycheck to continue in business, so he had to produce something.

I became involved in trying to solve problems with leaky nozzles. The most critical problem with the nozzles was that the plastic balls inside the nozzles were not made as the designed required. They were supposed to be made out of a more expensive and durable material, possibly injection molded. Schweitzer substituted a cheaper, more fragile material. This would present a potentially disastrous situation on board a ship because if the ball shattered, the nozzle could possibly lock in one position. If it is in the closed position and there is a fire, it won't spray water.

Another employee and I tested the balls. We threw them on the floor and they shattered. That was a bad sign. That same employee told me, within earshot of Mr. Schweitzer, that they shattered when thrown on the floor. Mr. Schweitzer obviously heard this report because he glared at us. I believe that he did ship them out or I wouldn't be here today.

Putting aside the problem of the plastic used by Mr. Schweitzer, the balls needed to be lubricated to cut down the friction so they would easily and smoothly move into the different positions. I suggested that a special high pressure, water resistant grease be used. But Mr. Schweitzer found his own grease, which was high pressure but not water resistant and cost a lot less.

The result was that the grease would be washed away, and to be effective would need to be reapplied each time the nozzle is used. No one was telling the Department of Defense this, so the grease was not being reapplied. Without applying more grease, the balls would probably break due to the friction.

Another problem was that the screw holding the nozzle handle leaked. Mr. Schweitzer decided to use caulk purchased from a hardware store to stop those leaks. Caulk may stop leaks in a stormwindow during a thunderstorm, but it wouldn't stop 100 pounds per square inch of water pressure from a fire hose. The goal was to make the nozzles at least temporarily leak-proof enough to pass inspection, not to guarantee that the nozzle would work.

There were many other problems, but, in short, the nozzle job wasn't like anything I have ever seen. Mr. Schweitzer was only interested in taking the minimal quality assurance steps.

During my time with Alchemy, Leo Schweitzer told me many times that he was going to be a millionaire. People like Leo know that DOD has a big pile of money to spend and the system is too complicated to adequately keep track of what is going on.

I would be glad to answer any questions that you may have.

Senator ROTH. Mr. Savicki, why didn't you report Leo Schweitzer to the Department of Defense, if you knew that he was doing something wrong?

Mr. SAVICKI. To start, Senator, the way I envisioned the Department of Defense was that they wouldn't buy a product that they would, at least, give a minimum of attention to at least try it out completely.

Senator ROTH. But you knew that these nozzles were to be used, and how they were to be used, didn't you?

Mr. SAVICKI. Yes, sir, but in the beginning, I was not involved with those nozzles. I had envisioned that the QAR would pick up any problems with them.

Senator ROTH. Did Leo Schweitzer have any engineering or machine shop experience himself?

Mr. SAVICKI. I never spoke to him directly about that, but from what I observed, I doubt it very much, sir.

Senator ROTH. As I understand it, he was the one that was making the decisions such as materials to be used, modifications, and so forth.

Mr. SAVICKI. Yes, sir.

Senator ROTH. Did Alchemy have its own internal quality assurance representative?

Mr. SAVICKI. Not that I could see, sir. He gave the title to different people from time to time, but none of them had the expertise to do the job.

Senator ROTH. Are you aware of any orders given by Leo Schweitzer to deceive the DOD quality assurance representative?

Mr. SAVICKI. I never heard him say this directly, sir.

Senator ROTH. We have heard criticism about the Department of Defense quality assurance representatives. From your own experience, do the Defense quality assurance representatives do their job properly?

Mr. SAVICKI. I have seen some that do a very good job, a tremendous job. There are some very bad ones, sir.

Senator ROTH. What was your experience at Alchemy?

Mr. SAVICKI. Very bad. I wouldn't say, I would say very inexperienced.

Senator ROTH. What would you do if you were in a position of authority to prevent this kind of incident from happening in government procurement?

What steps would you take to help ensure that the government is getting what it contracts for?

Mr. SAVICKI. If I were the purchaser?

Senator ROTH. Yes.

Mr. SAVICKI. Adequately trained people like the QAR man, especially him, he could stop this stuff from getting into the system, and as I heard earlier testimony, losing itself in the haystack, then recalling it is a big job. In the beginning, if the inspection was thorough, then it could be stopped in place.

Senator ROTH. What about increasing the penalties as far as the owners and managers of companies that intentionally defraud the government, do you think that it would have a positive impact?

Mr. SAVICKI. I think that as long as they are out to make the buck, if you have a chance to take a buck back off of him, it would have a big impact.

Senator ROTH. Take the buck from them?

Mr. SAVICKI. Right.

Senator ROTH. Do you think that would have a bigger impact than putting them in jail?

Mr. SAVICKI. I think so. I think so.

Senator ROTH. Get them where it hurts them.

Mr. SAVICKI. I think that would hurt them.

Senator ROTH. Mr. Rinzel.

Mr. RINZEL. Mr. Savicki, this nozzle that we have been talking about here, what was the primary problem with it from your standpoint? What did you tell Leo Schweitzer was wrong with it, and what did he refuse to do to fix it and make it work right?

Mr. SAVICKI. The balls were breaking. Leo pointed this out to me himself, that the balls broke.

Mr. RINZEL. The little plastic ball inside of the nozzle?

Mr. SAVICKI. Yes. He had been testing one privately, and he called for me, he sent someone to get me. I went out and he was testing one privately. He said: "It won't shut off," and there was really no water flowing, it was just drizzling. I said, "Leo, the ball is broken." He said, "What can we do?" I said, "Leo, the ball is broken. There is only one obvious thing to do and that is to make better balls."

Another problem, and I pointed it out to him——

Mr. RINZEL. The ball broke because he was using an improper method of forming the ball; is that right?

Mr. SAVICKI. The method was a casting method, and that is weaker than injection method, or a metal ball. A metal ball in casting would still be stronger than the plastic casting.

Senator ROTH. Were you actually testing them?

Mr. SAVICKI. No, sir. I tested one by throwing it on the floor.

Senator ROTH. I didn't mean you. I mean were the nozzles actually tested as to whether they functioned properly at the plant?

Mr. SAVICKI. At the plant, as Mr. Koons pointed out, they were being tested by the QAR only to satisfy the letter of the specs, and that would be a pressure test.

I had asked Leo to let me take one of those valves down to a fire station and have the firemen try them out, because I had trouble convincing him that this was a bad product. He didn't have the first valve completed yet. I had made arrangements with the fire chief of a volunteer fire company to have this flow test performed, even though it wasn't required.

Leo was delaying in getting the first valve produced, and the fire chief asking me about it. He was setting up classes to train his personnel in firefighting with these nozzles.

Mr. RINZEL. Mr. Savicki, did you get the valve tested or not?

Mr. SAVICKI. Not for flow.

Mr. RINZEL. What happens when you are on a Navy ship and you turn one of these nozzles on, and the ball breaks, and you can't turn it off? This is a very big nozzle, isn't it, and you have a lot of water pressure in it.

Mr. SAVICKI. You couldn't shift position which would give you the option of taking a stream or a fog.

Mr. RINZEL. How many sailors does it take to operate one of these things?

Mr. SAVICKI. About five.

Mr. RINZEL. You need people to hold the hose down, some people aiming the nozzle, and if you can't shut it off, it becomes a major safety problem; isn't that right?

Mr. SAVICKI. Yes, sir.

Mr. RINZEL. If you can't turn it on, then it becomes a problem because you can't get any water out of it; right?

Mr. SAVICKI. Yes.

Mr. RINZEL. You can't shift it from the fog to the direct stream either.

Mr. SAVICKI. Yes, that is right.

Mr. RINZEL. You were aware and he was aware of all those things at the time that it was being manufactured. Is that correct?

Mr. SAVICKI. Yes, because, as I pointed out, the first time the ball broke, and he couldn't shift it——

Mr. RINZEL. I don't have any further questions.

Senator ROTH. One or two more questions. Were you aware that there is a hotline on which you could call people in the Defense Department and alert them to the fraud that was being committed against the government?

Mr. SAVICKI. I think I learned that subsequent to being employed by Alchemy, but I didn't at that time.

Senator ROTH. If you had known that, do you think you might have utilized the hotline?

Mr. SAVICKI. I think many people at Alchemy would have utilized the hotline, yes.

Senator ROTH. So there needs to be better knowledge of this avenue.

Mr. SAVICKI. Yes, Also, Senator, there is still the intimidation, you would still have to use your employer's name on a resume, and the grapevine and things like that wouldn't enhance your employment possibilities somewhere else.

Senator ROTH. Of course, on the hotline, your name would be protected.

Mr. SAVICKI. Yes.

Senator ROTH. Thank you, Mr. Savicki for being here today and for your patience.

The subcommittee will be in recess until 10 o'clock tomorrow.

[Whereupon, 12:35 p.m., the subcommittee recessed, to reconvene at the call of the Chair.]

PRODUCT SUBSTITUTION IN DEPARTMENT OF DEFENSE CONTRACTING

FRIDAY, OCTOBER 16, 1987

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The subcommittee met, pursuant to recess, at 10:05 a.m., in room SD-342, Dirksen Senate Office Building, under authority of Senate Resolution 80, section 13, dated January 28, 1987, Hon. William V. Roth, Jr. presiding.

Members of the subcommittee present: Senator Sam Nunn, Democrat, Georgia; and Senator William V. Roth, Jr., Republican, Delaware.

Members of the professional staff present: Eleanore J. Hill, Chief Counsel and Staff Director; Daniel F. Rinzel, Chief Counsel to the Minority; Mary D. Robertson, Chief Clerk; David B. Buckley, Investigator; Stephen H. Levin, Staff Counsel to the Minority; Mary K. Vinson, Staff Investigator for the Minority; Carla J. Martin, Assistant Chief Clerk to the Minority; Verna Wilkins (Senator Roth); Marianne McGettigan (Senator Rudman); Sean McAvoy (Senator Cohen); Evelyn Boyd (Senator Sasser); Barbara Kammerman, Deputy Chief Counsel to the Minority; Sallie B. Cribbs, Executive Assistant to the Minority Chief Counsel; Harold Lippman, Investigator; and Declan Cashman, Secretary.

[Senators present at convening of hearing: Senator Roth.]

[The letter of authority follows:]

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

Pursuant to Rule 5 of the Rules of Procedure of the Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, permission is hereby granted for the Chairman, or any Member of the Subcommittee as designated by the Chairman, to conduct open and/or executive session hearings without a quorum of two members for the administration of oaths and the taking of testimony in connection with hearings on Product Substitution in Department of Defense Contracting to be held on October 15 and 16, 1987.

SAM NUNN,
Chairman.
WILLIAM V. ROTH, JR.,
Ranking Minority Member.

OPENING STATEMENT OF SENATOR ROTH

Senator ROTH. This morning, we are continuing hearings on the problem of unauthorized product substitutions by government con-

tractors. Yesterday, we heard about contractors and subcontractors who, in the furtherance of their get rich quick schemes, deliberately provided the Defense Department with defective parts and equipment thereby risking the lives of our servicemen and women in order to make a bigger buck.

We also heard about the difficulty the Department of Defense has monitoring the many defense contractors to ensure that they get safe and effective products. Some of these companies seem like the mythical Hydra, chop one head off and it grows another.

We have also heard that the Navy, five years after first discovering a problem with a defective fire hose nozzle, was only now getting around to removing all of them from Navy ships.

Today, we will hear from an engineer who blew the whistle on a company known as The Spring Works, that was later convicted of defrauding the government. We will also hear about government contractors who bought springs from The Spring Works and how these companies attempted to or failed to deal with The Spring Works' products. We will hear from the operator of Spring and Wire Designs, a successor company of The Spring Works.

At this time, we will call forward Mr. David Rupp, an engineer who was a former employee of The Spring Works, Inc.

Mr. Rupp, will you please stand and raise your right hand. Do you swear that the testimony you will give before the subcommittee will be the truth, the whole truth and nothing but the truth so help you god?

Mr. RUPP. I do.

Senator ROTH. Please be seated. Do you have a prepared statement, Mr. Rupp?

Mr. RUPP. Yes, sir.

Senator ROTH. Please proceed.

TESTIMONY OF DAVID C. RUPP, ENGINEER, FORMER EMPLOYEE OF THE SPRING WORKS, INC.¹

Mr. RUPP. My name is David Rupp. I am currently employed as an engineer in the Propulsion and Environmental Controls Department of McDonnell-Douglas.

In 1985, I started work at The Spring Works. The Spring Works is a small machine shop equipped primarily to manufacture specialty springs, which are not available through ready-made sources.

Bill McCullough owned 51 percent of The Spring Works and was the president and driving force behind the company's operation. He made all the key decisions, both technical and financial, although he has no technical training and was not an engineer.

In addition to manufacturing, The Spring Works also had facilities to perform a limited number of additional processes on the springs designed to temper or strengthen them.

After about six months on the job, I was promoted to a position with broad responsibilities which gave me a good overview of the operation of The Spring Works and the substandard products it supplied to the aerospace customers. In roughly 80 percent of the

¹ See p. 139 for Mr. Rupp's prepared statement.

military contracts, there was some sort of inferior product substitution present.

There were several different ways in which these product substitutions would occur. However, all product substitutions had one thing in common, certifications were falsified by The Spring Works. McCullough had used false certifications since the inception of The Spring Works. In fact, he amassed a library of blank certifications with all but the vendor's signature whited out.

McCullough actually had a code for the shortcuts, which were to be taken to save money or time on a particular job. Two of his usual instructions were:

"M/C," this meant a material change, usually involving the substitution of a cheaper type of material in lieu of the blueprint requirement, and this usually involved a stainless steel. Also the instructions might have included a "dupe," this meant to pull a whited out certification from the file and falsify it accordingly.

It is ironic that the cost of doing business properly, with approved sources, was about equal to the cost of the illegal methods used by Mr. McCullough. However, Mr. McCullough still demanded that things be done his way.

I became very uneasy about The Spring Works methods and began asking buyers what products our springs were to be used in. I was amazed at the broad range of the weapon systems and aircraft which incorporated items made by The Spring Works.

Mr. McCullough knew the potential safety problems that he was creating, but he was still insisting on cutting corners, like using cheaper stainless steels and failing to have the springs adequately heat treated or plated properly.

Mr. McCullough had an uncanny knack for knowing which of his customers tested the items they ordered, and how the testing was performed. And he responded accordingly; that is how he was able to keep his manufacturing scheme going for seven years.

This is not to say that he was perfect; he was caught occasionally. However, when a customer found out that the springs they ordered were made from the wrong material or had not been processed properly, in all the cases that I can remember, Mr. McCullough was able to talk himself out of a bad situation.

I remember one time when a customer sent a defective order back to be remachined, the items remained in the shipping carton, unopened, while the customer telephoned repeatedly, telling Mr. McCullough how urgently he needed the springs. Finally, when the customer was desperate for these specially made springs, Mr. McCullough sent them back in the same box, unopened, as originally sent to us. They were accepted by the customer without a word.

It soon became clear that I could do nothing to change the way The Spring Works did business, so I left The Spring Works in May of 1985. At first, I kept the problems I witnessed at The Spring Works to myself, but I was constantly bothered by the fear that some of these substandard items could result in a disastrous accident.

I decided to telephone and write letters to the people I knew to explain what was going on at The Spring Works. One of my letters was turned over to Mr. McCullough who, I assume, then hired a private investigator to see what I was up to. Needless to say, I re-

fused to talk to the investigator and was quite happy when the Defense Criminal Investigative Service began its investigation in this case.

As an aerospace engineer, I am particularly concerned about the general problem of product substitution, but as a concerned citizen, I am especially alarmed when these problems involve military vehicles and weapon systems.

I appreciate the opportunity to testify before this subcommittee today so my efforts can help to resolve this potentially critical problem. I would be pleased to answer any questions you might have at this time.

Senator ROTH. Mr. Rupp, first I want to express my appreciation that you had the courage and sufficient interest to follow through on your concerns. I might start out by saying that these were pretty serious matters, these defects in the springs, as I understand your testimony. Your full statement will be included in the record.

You state that Mr. McCullough would actually write down on the contract directions things that were contrary to the contractual requirements. This was sort of a code, a lingo of deception. How did you come to learn that lingo?

Mr. RUPP. He had used that type of coding before I started to work there. He has what they considered a job traveller, which came off the computer at that time, and it stipulated the material, the types of processing; and that traveller never went to the customer. It was an internal document.

On that document, he usually wrote, in red pencil or red pen, "M/C," and he would scratch out the material that was stipulated on that traveller, and write in a different type of material, usually cheaper and more readily available.

Senator ROTH. I would like to go back to a comment I made a few seconds ago that these defects, the products of intentional malfeasance, were pretty serious. For example, in your statement, you say that "the company substituted a cheaper type of stainless steel, a material that was not as strong and resistant to heat and, therefore, did not perform well at higher operational temperatures. The company failed to heat treat springs or failed to heat treat them properly."

You go on to say, among other things, "the company failed to properly plate the springs with cadmium, which can result in contamination and hydrogen embrittlement, causing the springs to become fragile and break."

These are pretty serious matters, aren't they, especially if one looks at the potential use of these springs?

Mr. RUPP. Yes, they are.

Senator ROTH. I don't have the springs here, but normally if you are buying this kind of spring commercially, it is probably a pretty cheap item. But a pretty fancy price was being paid for these specialty springs produced by the company you were formally associated with?

Mr. RUPP. Yes, they are.

Senator ROTH. Could you explain in your own language why you think these defects were serious?

Mr. RUPP. Just on some of the cases you stipulated, using the lesser grades stainless steel, if you substitute a high grade stainless

steel typically used in aerospace with a lesser grade, first off, you don't get the performance qualities at elevated temperature. They tend to get mushy even at higher temperatures where you need the responsiveness of a spring.

The plating, if you don't process the plating properly, you get a spring that is very brittle. Actually, when you go to function, it will—the terminology might be—crash. It won't hold the support of the load. It will just fail initially, and it could be very disastrous in the right opportunity.

Also in the heat treat, if you don't get the right strength that you are looking for, it could not perform at requirements stipulated in an assembly or a mechanism.

Senator ROTH. Isn't it true that these springs found their way into all types of complicated defense systems? For example, we have over there a chart showing various types of planes that these springs were used in.

Mr. RUPP. Yes, they will, eventually.

Senator ROTH. The failure of a spring could risk not only the plane but, more importantly, the men and women serving on that plane.

Mr. RUPP. Yes, sir.

Senator ROTH. I would like to go back a minute because one of my concerns is how we can set up the kind of system that would provide an individual worker like yourself with the opportunity to put, if not the customer, then the Department of Defense on notice.

I take it from your testimony, while you were on the job, you had no notice of the so-called "hotline" that can be used to report fraud and malfeasance to the Pentagon?

Mr. RUPP. No, I had no notice of that.

Senator ROTH. I take it, from the actions you took when you realized what was going on, such as looking for and finding another job, and then letting some of the customers know about the problems, that you were concerned about the situation at The Spring Works. But if you had some means of notifying the Department of Defense while on the job, would it have been easier for you to act?

Mr. RUPP. Yes, I would have called if that number were available.

Senator ROTH. But you were not aware of that.

Mr. RUPP. No, sir.

Senator ROTH. It is a difficult question as to how you get that information around at all levels so that all employees know about it. Obviously, those fly-by-night outfits that are deliberately involved in fraud are not going to run around making that common knowledge.

Would it help to require that there be some kind of a notice put on the walls of contractors' facilities? They usually have, don't they, some kind of a bulletin board for employees, and it could be required that the "hotline" telephone number be listed.

Mr. RUPP. It would help quite a bit.

Senator ROTH. I think that this is something that we ought to look into.

When you notified the customers of The Spring Works, you really went into great detail, didn't you. You wrote a pretty exten-

sive letter and tried to document it so it was not what might be called an angry, former employee letter.

Mr. RUPP. No. I am engineer by training, and I try not to hold too much to memory, so I try to write most of my thoughts down so that they can be remembered accurately years later as in this case.

Senator ROTH. In your statement to us, you mentioned that McCullough kept a library of blank certifications signed by vendors. Can you explain how he used these to deceive his customers?

Mr. RUPP. He would receive a valid certification from certain processors. As it comes from the processor, it is all typed on, so he would proceed to white out all the typed on data and make a copy of that whited out form. In essence, when he gets to that point, he has a blank invoice with an inspector stamp on the bottom and a signature. If he were to type on the data that he wants typed on to that form, and take another Xerox of that thing, he has what is in all practical appearance a valid certification.

Senator ROTH. It seems to me what you are saying is that McCullough was really operating in direct defiance of the contract provision and the law. Was the company ever visited by quality assurance representatives?

Mr. RUPP. Yes.

Senator ROTH. Whose representatives were they?

Mr. RUPP. Parker Hannifin, I believe, and Airesearch.

Senator ROTH. In your prepared statement, you note that you found it necessary to prepare a quality control manual. Did The Spring Works have any policies or manuals to which it even played lip service?

Mr. RUPP. Prior to me coming there, they did have a quality assurance, what you could almost term a quality assurance pamphlet, it was roughly three pages, and I expanded on that. To qualify for prime contractors, you had to have an apparatus to control everything in that machine shop, and when I got done with that document, it was roughly 45 pages, and it stipulated verbatim how things were supposed to go through the shop.

Senator ROTH. Did McCullough pay any attention to that manual?

Mr. RUPP. No.

Senator ROTH. Let us go back to your own personal experience. You sent, as I pointed out, these letters to a number of customers of The Spring Works. What kind of response did you receive from these letters?

Mr. RUPP. Parker Hannifin was the first corporation that I contacted by telephone. They took very keen notice of that. They were very interested and they took very prompt action.

Airesearch, I contacted by telephone, they had a big apparatus there where the right-hand didn't know what the left-hand was doing, and not much action came out of that.

[At this point, Senator Nunn entered the hearing room.]

Mr. RUPP. I sent letters to G&H, and as far as I know nothing came of that.

Senator ROTH. Let me ask you about your notifying these customers, has that been a problem for you in any way on your present job?

Mr. RUPP. No, sir. My current company stood by me the whole time and they actually endorse some of the things that I have been trying to do.

Senator ROTH. What about your former employer, did he take any action?

Mr. RUPP. There was a private investigator that came out to talk to me.

Senator ROTH. What was the thrust of his investigation?

Mr. RUPP. He was trying to find out information from me concerning this case.

Senator ROTH. Were any kind of threats made to you?

Mr. RUPP. None to my knowledge, directly.

Senator ROTH. Did you feel any concern at that stage?

Mr. RUPP. My wife did. She felt uneasy about what I was doing. I feel very firmly that what I did was correct, and I think that I would do the same thing today.

Senator ROTH. We discussed a few minutes ago perhaps some kind of a requirement that the "hotline" numbers be listed at the plant. Do you have any other suggestions for the subcommittee on how to prevent this unauthorized product substitution from happening, or how to make it easier for concerned employees to take action?

Mr. RUPP. In the case of The Spring Works, he was a very heavy-handed person, and very intimidating. So even if you posted that "hotline," I don't know if very many people would respond with that type of operator.

Senator ROTH. You think that there would be too much fear?

Mr. RUPP. Yes I would have been fired on the spot if I would have brought it to the prime contractor's attention.

Senator ROTH. So you don't think that a requirement that a hotline bulletin be publicly displayed that not only gave the telephone number but assured anonymity would help much in the circumstances you worked under at The Spring Works?

Mr. RUPP. I still think that there would probably be a lot of fear.

Senator ROTH. We are pleased to see our chairman here.

Do you have any questions, Senator Nunn?

Senator NUNN. No, Mr. Chairman, I don't have any questions. I do want to commend Mr. Rupp for his, I think, very forthright and candid disclosures which, in the long run, are absolutely essential to protect the men and women who basically protect this nation.

I think you served your country and I congratulate you.

Senator ROTH. I think that Mr. Rinzel has a question or two.

Mr. RINZEL. Thank you, Senator.

Mr. Rupp, I have a copy of a letter, dated July 3rd, 1985, that you sent to G&H Technology. Do you recall sending such a letter at that time?

Mr. RUPP. Yes, I do.

Mr. RINZEL. It was about the practices in The Spring Works operation. You wrote in that letter that "among these practices are monetary and gift gratuities, price fixing, heat treat material and process certification falsification." Do you recall that?

Mr. RUPP. Yes, I do.

Mr. RINZEL. What were the monetary and gift gratuity practices and price fixing that you were referring to?

Mr. RUPP. Some of the gifts were to the buyer of G&H. They came in the form of car cover, cases of oil for his car, dinners at exclusive restaurants in Los Angeles, basketball tickets. Basically, the buyer called up and said, "It would be nice to go to the Celtic/Laker game tonight," consequently, we got on the phone, scrambled around and got tickets.

The price fixing, there was another buyer at G&H who continually did price comparisons, and he would continually call us up and say, "Your prices are 30 or 40 percent higher than some guy right down the street," but we always got the order. We got maybe 80 percent of the business that we quoted even though this one buyer was saying that three or four vendors could make this part for 30 percent cheaper.

Mr. RINZEL. There is an addendum to this letter that says, "P.S. Pete," is that Peter Wanbaugh? Did you know him?

Mr. RUPP. I have never met him personally.

Mr. RINZEL. Did you talk to him on the telephone?

Mr. RUPP. Yes.

Mr. RINZEL. It says, "Part of the problem stems from the buyers at each of the companies, including Mike Norman—common or fast deliveries with little care for price, little care for quality. If you have any doubt about any of the certifications in this package"—which you attached—"call Industrial Heat Treater, and I promise they will know nothing about these parts."

What were you suggesting that they do there?

Mr. RUPP. I guess some of the letters that I wrote, people didn't believe me. They thought I was being too hard on The Spring Works. What I was trying to tell them in that case there was to call up the Heat Treater, they have a record of those parts and the certification numbers and everything. All you have to do is call up and say, "Did you do a job for The Spring Works on September 14, the part number is this?" They can pull up their records and say yes or no. It is very easy to do.

Mr. RINZEL. Since you knew they had falsified the certification, you knew that if they made such a check that it would be obvious that the certification had been falsified?

Mr. RUPP. Yes. I think that calling up and verifying the certification should probably be part of a routine check, the same as they do a quality check of the springs. They test two or three out of 100-part order. They ought to take a certification and call up and verify the certification randomly. I think that this would cut down on a lot of the false certifications.

Mr. RINZEL. Were you aware, Mr. Rupp, that this letter that you wrote to G&H Technology was turned over by G&H to Bill McCullough at The Spring Works?

Mr. RUPP. No.

Mr. RINZEL. What do you think of that fact?

Mr. RUPP. As a contractor, as G&H is, if somebody comes along with information telling them that a wrongdoing is being taken, they should have contacted DOD and said, "We have a problem," like I think Parker Hannifin did, rather than go back to the vendor and tell him what is going on. I don't think that this is very fair or very ethical.

Mr. RINZEL. Thank you, Mr. Chairman.

Senator ROTH. I think that is particularly true when the letter was carefully prepared and well-documented.

Mr. RUPP. This wasn't something that was just written off-the-cuff. It has substantiating evidence of wrongdoing.

Senator ROTH. Again, I want to congratulate you for the role and the interest you showed. I wish that we could devise some means whereby it would be easier for individuals who are aware of such situations to notify the Pentagon. If you have some future thoughts on it, we would be very much interested.

Thank you for taking the time to be here today, Mr. Rupp.

Mr. RUPP. Thank you.

Senator ROTH. Next we call Mr. Wayne Aho of the Spring and Wire Designs.

[At this point, Senator Nunn departed from the hearing room.]

Senator ROTH. Please stay standing and raise your right hand. Do you swear that the testimony you will give before the subcommittee will be the truth, the whole truth, and nothing but the truth so help you God?

Mr. AHO. I do.

Senator ROTH. Please be seated.

Mr. Aho, if you would please proceed with your statement. If you can abbreviate it in any way, it will be incorporated as if read. Would you proceed.

TESTIMONY OF WAYNE AHO, SPRING AND WIRE DESIGNS

Mr. AHO. My name is Wayne Aho, and I am the current owner of Spring and Wire Designs.

I have been the owner since October 1st, 1986. I will attempt to detail the events that have taken place over the past year and one half, clarifying my relationship with Bill McCullough and Stuart Baron, the previous owners of the company I purchased.

In the early part of June, 1986, I interviewed for a position as an independent sales representative for The Spring Works. I was hired approximately one week after my interview. At this point, I started soliciting business for The Spring Works, Inc. The customers I called upon were the existing accounts with Rockford Products, another company I was selling for. I did not go after new accounts or accounts that The Spring Works already had. I would like to make it clear at this point that no mention was made of any product substitution or wrong doing that The Spring Works had committed.

Around late July of 1986, Bill McCullough offered me a full-time position as marketing manager of The Spring Works, Incorporated. Since the company was a southern California based company, and because of the amount of travel I was doing with Rockford Products and the logistical problems encountered with Rockford, I decided to join The Spring Works full-time.

Once I decided to join The Spring Works as marketing manager, Stuart Baron issued a letter announcing a name change from the The Spring Works, Incorporated, to Spring and Wire Designs, and he introduced me as marketing manager. When I questioned the name change, Mr. McCullough stated reasons that seemed logical at the time. The reason given was that The Spring Works had had

a long conflict with two other companies in the Midwest with the same name, The Spring Works.

The first task at hand was to build a company that had fallen from \$65,000 gross sales per month in mid-1985 to less than \$29,000 gross sales in July of 1986. My first question was: Why did sales drop off in one year? The answer given by Mr. McCullough was the lack of a sales force. With that I contacted several customers and started to make sales calls on my own, and I also started building a small sales staff. This is when I realized some of the problems that The Spring Works had had.

Knowing the competitive nature of the business, I started contacting the aerospace industry, and this is when buyers started to inform me that The Spring Works had committed a crime by substituting raw materials and falsified material certifications. When I approached Mr. McCullough on this, I was given bits and pieces of what had happened.

Subsequently, the more sales calls I would make, the more information I would get from the buyers of the aerospace industry. Each time, I would get reports of these crimes, I would approach Mr. McCullough and he would feed me a little more information about the matter. At this point in time, I began to wonder what I had gotten myself into.

To make matters worse, I found out that Mr. McCullough was seriously thinking of selling the business. At this time, I sat down with Mr. McCullough and voiced my concerns about working at Spring and Wire Designs, as it was called at this time. Mr. McCullough told me that he would promote me to vice president and that he would negotiate with prospective buyers so that I could continue to work for at least one year.

I realize that the possibility of becoming unemployed was a good one, which is why I then decided to enter into negotiations of my own to purchase Spring and Wire Designs.

I spoke with Mr. McCullough about the possibility of purchasing the company and he accepted this as a favorable prospect. At this time, I spoke with a few banks and concluded that no one would finance me. After finding this out, I spoke to Mr. McCullough and told him that I did not feel I would be able to come up with the cash needed to purchase the company.

This is when he approached me about the possibility of a lease option. It seemed that he was having no luck in finding a buyer, and there was also the possibility that he would be debarred. Therefore, rather than lose the business, Mr. McCullough would help me establish myself as the owner.

After the negotiations were completed, it was understood that I would not have to pay any downpayment, but I was to pay the sum of \$7,000 per month for 36 months. It was also understood that Stuart Baron would work for me and would give his engineering support for three years, which was the term of the lease agreement.

In the negotiations, it was also mentioned that Mr. Gary Peek be hired as president. Gary was working for Suspension Techniques across the street, which is also owned by Mr. McCullough and Stuart Baron. Gary was working in the industry and knows the manufacturing of springs. I questioned this move, but accepted it

based on the information given. What I was told was that Mr. McCullough and Stuart Baron had a lot to lose if I failed to make Spring & Wire Designs grow. And since I had no knowledge of springs Mr. Peek would lend his knowledge and expertise in the development and growth of Spring & Wire Designs.

On October 1, 1986, Mr. McCullough and I signed the lease agreement. Things seemed to be working out well, and the business was increasing. True, I had many obstacles in front of me, but I continued forward and seemed to be doing well, until I received a letter from the Defense Logistics Agency threatening to debar Spring and Wire Designs.

This was in November. Gary Peek made arrangements to meet with an attorney, Peter Meeka. Peter and I, and Mr. Peek, sat down and we discussed the problems. Peter contacted the Defense Logistics Agency and everything seemed to be straightened out. Mr. Meeka mentioned that I should go through a bulk sale transfer, which I now regret not doing.

Again things returned to normal and business continued to climb. At this time I also terminated Gary Peek as president. I started aggressively going after new customers. Mr. Baron ran the shop, and Mr. McCullough continued costing and quoting the jobs. In May of 1987, Bill McCullough and Stuart Baron got indicted for material substitution and falsifying certifications. They pleaded guilty and were sentenced to Boron.

I was now placed into a position of not having the expertise to continue as well as before. I now had to quote all jobs and my coilers started helping with the engineering. They started dividing Mr. Baron's duties. Some people started working 12 to 15 hours a day, along with myself, to get the products made and to the customers. In fact, we shipped more dollars in one month than we ever had, a total of \$72,000. To make a long story short we were making it.

Mr. Byron was let out of Boron in August and came back to work again. Things seemed to be working and settling in. But in September, I was hit with yet another surprise. A Mr. Daniel Rinzel, chief counsel to the minority of the U.S. Senate Permanent Subcommittee on Investigations, and Mr. Stephen Levin, also with the same office, came into my office.

They looked around the shop and asked questions about my relationship with Stuart Baron and Mr. McCullough. They also wanted to see financial agreements, which I refused to show. A few days after this, I received another letter from DLA threatening to debar Spring and Wire Designs.

At this point, I contacted Mr. Paul Gray, an attorney, and we sat down and discussed my problem. His conclusion was simple: Wayne Aho and Spring and Wire Designs would have to divorce ourselves from Mr. McCullough and Mr. Stuart Baron.

Mr. Gray said that I would have to buy the equipment and terminate Mr. Baron, and go through a bulk sale transfer. I took this information back to Mr. Baron, and he said that he would discuss it with Mr. McCullough who was still in Boron, but scheduled for release in three days.

At a later date, both Mr. McCullough and Mr. Baron agreed, so the three of us met with my attorney, Mr. Paul Gray, on September 17th and agreed to go through a bulk sale transfer.

Senator ROTH. Mr. Aho, as I understand it, with your leasing arrangement, things continued in large part the same as far as management of the company. As part of the arrangement, you agreed to name as president Mr. Peek, who was an associate of McCullough and Baron in another company they owned. Is that correct?

Mr. AHO. Yes.

Senator ROTH. So he was really part of their group?

Mr. AHO. Yes.

Senator ROTH. Did Mr. Peak ever really do anything?

Mr. AHO. No, he didn't. He was basically a figurehead.

Senator ROTH. Did you pay him anything for his services?

Mr. AHO. No. In fact, as I look back on it now, the only reason that he was put in that position was to become a signer on the checking account that I had.

Senator ROTH. In other words, he was an instrument for continued control by McCullough?

Mr. AHO. Yes.

Senator ROTH. Mr. Baron went to jail, is that correct?

Mr. AHO. Yes.

Senator ROTH. Why did he go to jail?

Mr. AHO. He was convicted for supporting the things that were going on, the product substitution and the falsification of certifications.

Senator ROTH. In other words, he was found guilty of malfeasance with respect to his work at The Spring Works.

Mr. AHO. Yes.

Senator ROTH. Upon his release, he came back to work for your company in what capacity?

Mr. AHO. Basically running the ship, the engineering and production scheduling, and troubleshooting the machines.

Senator ROTH. Is that pretty much what he did before?

Mr. AHO. I really can't answer that. When I was there as a sales rep, I never went into the officer very much. As I was the marketing manager, I never got out to the shop to actually see what he did.

Senator ROTH. In other words, he continued to play a very key role after his release from prison in your company?

Mr. AHO. I don't know if you want to call it a "key role," but, yes, he was actively involved in the company.

Senator ROTH. What did he do?

Mr. AHO. He was running the production schedule and engineering.

Senator ROTH. Production engineering is fairly important to production, isn't it?

Mr. AHO. I guess you are correct.

Senator ROTH. He owned 49 percent of The Spring Works?

Mr. AHO. Yes.

Senator ROTH. And Mr. McCullough owned 51 percent?

Mr. AHO. Yes, 51 percent.

Senator ROTH. What is Mr. McCullough's current status?

Mr. AHO. He is currently quoting or costing the jobs that are coming into the shop.

Senator ROTH. So he also is working at The Spring Works, under its new name?

Mr. AHO. He is not employed. I don't pay him a salary. He does do the quoting.

Senator ROTH. You pay him no salary, but he continues to be involved in the operation?

Mr. AHO. Correct.

Senator ROTH. Does he discuss with you in any way the operations or management of the firm?

Mr. AHO. He discusses the operation, but not the management. He does suggest certain customers that he finds that I should go after.

Senator ROTH. Have you discussed with him or has he discussed with you in any way your appearing here, and the testimony you were to present here?

Mr. AHO. Yes, he has.

Senator ROTH. What was the content of his discussion?

Mr. AHO. I don't really know if I should answer that, because there is an on-going investigation.

Senator ROTH. You are under an obligation, Mr. Aho, to answer the questions of this subcommittee. I should also call to your attention that you are under oath.

Mr. AHO. Right. He has basically been prompting me or telling me what to say and what to do when I am back here.

Senator ROTH. What did he recommend you do? What was his advice?

Mr. AHO. One, to come back here and make a strong stance that I am the owner, and there is no legal way of proving that I am not the owner, that he has no involvement in the Spring and Wire Designs' operations, or the running of the company.

Senator ROTH. Would it be accurate to say he was proposing that you help in a cover up?

Mr. AHO. Could you repeat that?

Senator ROTH. In effect, was he asking you to become involved in a cover up attempting to show that the old management really does not continue to play a key role in the current company?

Mr. AHO. Yes.

Senator ROTH. Going back to the question of control, Mr. McCullough is still involved in the operations and owned 51 percent of The Springs Works, and Mr. Baron owned 49 percent and continues to work on the production side. In October 1986, when you entered into the lease/purchase agreement, sales had dropped to \$29,000 a month, the company had a bad record hanging over its head, but you were asked to agree to pay \$7,000 a month for 36 months.

Mr. AHO. Correct.

Senator ROTH. Isn't that a pretty high price to pay for a company in that kind of status?

Mr. AHO. I think, in that status, yes. The reason that I agreed to do it was the opportunity given to me, going in with no money down, and basically assuming a company. Working in the industry, I

knew that the opportunity was there to grow. I didn't feel that it was much of a struggle to get the sales up.

Senator ROTH. Isn't it true that the past management, whatever the arrangement was, continued to enjoy pretty much the fruits of this operation under the lease option, partly by the fact that they were draining off \$7,000 a month, which is a pretty healthy sum. On \$29,000, how much of that would be profit?

Mr. AHO. I don't think I could tell you off the top of my head.

Senator ROTH. Roughly.

Mr. AHO. Probably about \$4,000.

Senator ROTH. So you were paying more than the monthly profit at that time.

Mr. AHO. Right. But when I entered into the lease agreement, sales were up to around \$50,000.

Senator ROTH. Nevertheless, you were paying a pretty healthy price, even at \$50,000. If I understand your figures, the \$7,000 would represent most of the profit.

Mr. AHO. Yes.

Senator ROTH. At the same time, McCullough and Baron, the two previous owners, continued to play a role in the operation of the firm, except for the period of time that they were in jail?

Mr. AHO. Yes.

Senator ROTH. When you had the option to buy The Spring Works, what did its assets consist of? Did it own the building and the equipment?

Mr. AHO. As I found out, approximately three weeks ago, they didn't own one thing.

Senator ROTH. They didn't own anything.

Mr. AHO. It is all held by a bank, Winn Bank. The building is leased by a Mr. Owens, or from Mr. Ownes.

Senator ROTH. There were no assets, either in real estate, building, or equipment, to purchase. It was all the so-called going business.

Mr. AHO. Correct, the customer list.

Senator ROTH. You more recently entered into an agreement, a bulk sale. What were the terms of that agreement?

Mr. AHO. I think that you should have a copy up there.

Senator ROTH. Just summarize it very quickly.

Mr. AHO. It is basically a complete buy-out of the equipment.

Senator ROTH. There is equipment now to buy?

Mr. AHO. Yes. All of the equipment that was held by Winn Bank is now held by myself. It has been signed over to me.

Senator ROTH. That equipment was actually paid for by you after you acquired your lease option; is that correct?

Mr. AHO. Yes.

Senator ROTH. So, in a sense, you are paying a second time for the sale equipment. How much did you pay?

Mr. AHO. \$168,000.

Senator ROTH. So you paid \$168,000, and between the time you entered into the option lease to date, you have paid \$7,000 a month; is that correct?

Mr. AHO. Right.

Senator ROTH. During your employment with The Spring Works, were you aware of any illegalities being performed by the compa-

ny, such as the substitution of substandard material and the falsification of records?

Mr. AHO. No, I wasn't.

Senator ROTH. At no time.

Mr. AHO. No.

Senator ROTH. What about when you went around to call on customers I believe, in your prepared statement, you said that you became aware of these illegalities at that time.

Mr. AHO. Right, that is when. When I joined the company as a sales rep, I had no knowledge. Then after I entered into full-time employment and I started to make the sales calls, that is when I found out from the buyers that I was calling that there was a problem with the old company, and they were basically in trouble.

Senator ROTH. When did The Spring Works change its name to Spring and Wire Designs?

Mr. AHO. I think that it was around August or so.

Senator ROTH. That was before you acquired your interest?

Mr. AHO. Correct.

Senator ROTH. What was the purported reason for the name change?

Mr. AHO. I was told at that time it was due to a conflict with two other companies supposedly in the Midwest that had the same name.

Senator ROTH. At the present time, do you think that was the real reason?

Mr. AHO. No, I don't.

Senator ROTH. What do you think the real reason was?

Mr. AHO. I think they were trying to cover up, trying to continue to do business, or hanging on to something that they feared they were going to lose.

Senator ROTH. Let me ask you this. According to your testimony, the company has now paid for equipment since you took over the management.

Mr. AHO. Yes.

Senator ROTH. Business has gone up. Are you reasonably profitable now?

Mr. AHO. I am making a substantial living.

Senator ROTH. Knowing the shadow over these two past owners, why do you tolerate their presence in any way? Why don't you just get rid of them and clear up the scene?

Mr. AHO. Do you mean currently, or four months ago?

Senator ROTH. Why don't you run the organization yourself and tell McCullough and Baron that they are not to come on the premises?

Mr. AHO. That is the goal in the next week or so.

Senator ROTH. Why haven't you done it up until this time?

Mr. AHO. Up until about five weeks ago, I didn't really see a need. I needed Stuart Baron for his expertise, for one. Yes, I could survive without Stuart around, which I have proved that I could do.

Senator ROTH. Are either Baron or McCullough doing business with the government? I understand that they have an interest in at least two other firms that are contiguous or in the same area as

yours. Are they doing business with the government or government contractors?

Mr. AHO. No, they are just consumer type outfits. They sell springs and suspension parts to the after-market.

Senator ROTH. What percentage of Spring and Wire Designs orders are government subcontracts or contracts at the present time?

Mr. AHO. Approximately a month ago, we were probably running 30 to 40 percent, if that. Currently, when I left the office on Tuesday, most of the orders were fulfilled, and I think that we are down to approximately 10 percent, maybe a little higher.

Senator ROTH. How does the price of the springs sold to the government contractors compare with commercial sales?

Mr. AHO. They are a lot higher in the aerospace or government. The commercial is basically down and dirty, you almost have to give the parts away for what you put into the cost of the material, and so forth.

Senator ROTH. Do you sell any of the same product to the government contractors and to the commercial contractors?

Mr. AHO. The same products, no. Every spring that we manufacture is made to customer specification. Each has its own individual characteristics.

Senator ROTH. Is it fair to say that nothing much really changed after you entered into the lease/purchase agreement in October, 1986, that is, Bill McCullough was still taking orders, making bids, generally running the show, Stuart Baron was running the shop, and you were attempting to drum up sales?

Mr. AHO. I think that you could sum it up that way.

Senator ROTH. Did this situation continue until McCullough and Baron went to prison?

Mr. AHO. Yes.

Senator ROTH. When did that occur?

Mr. AHO. May of 1987.

Senator ROTH. When did they get out of prison?

Mr. AHO. Bill McCullough got out approximately four weeks ago, and I think Stuart got out approximately two months ago.

Senator ROTH. Has Bill McCullough or Stuart Baron ever referred to you as their frontman or strawman?

Mr. AHO. Yes, they have.

Senator ROTH. Is that an accurate description of what has been occurring?

Mr. AHO. Now that I look back over the year-and-a-half, yes.

Senator ROTH. But you are going to get rid of them in the future?

Mr. AHO. If things work out right.

Senator ROTH. Mr. Rinzel has a question.

Mr. RINZEL. Mr. Aho, you were served with a subcommittee subpoena and, pursuant to it, you delivered some records to the subcommittee. Is that correct?

Mr. AHO. Yes.

Mr. RINZEL. One of these was a letter dated April 24th, 1987, to a Fred Freidman who, I guess, was the lawyer for Stuart Baron; do you recall that?

Mr. AHO. Yes.

Mr. RINZEL. You said in the letter that "despite the alleged wrongdoings Stuart is charged with, the severity of Stuart's sentence will have a negative impact on my business. My reason is simply. G&H Technology of Santa Monica has made a statement in regard to Stuart's sentence, and that statement was that 'we will have to look elsewhere for the engineering support and expertise that Stuart can offer.'"

Does this mean that G&H Technology told you that if Stuart wasn't employed, they wouldn't place orders with your company?

Mr. AHO. Yes.

Mr. RINZEL. Do you recall who told you that?

Mr. AHO. I think that it was Greg Toberman.

Mr. RINZEL. Who is he?

Mr. AHO. He is the current buyer at G&H Technology.

Mr. RINZEL. I don't have any further questions, Mr. Chairman.

Senator ROTH. A couple more questions, Mr. Aho.

Now that you are the owner, what steps have you taken to ensure that the improper actions of the past have been corrected, that is, that the products that you supply to government contractors meet specifications?

Mr. AHO. One, I have revamped the whole quality control area. I installed a receiving and shipping inspector so that all of the raw material that comes in is checked, weighed. The certifications are checked. If there is no certification, the wire doesn't go on the floor. She is responsible for stamping off all of the paperwork and putting that material in stock. None of the stock can be pulled out without her authorizing it, or her pulling it herself.

Senator ROTH. Has any effort been made to notify past customers of the defective wires or springs?

Mr. AHO. Defective wires?

Senator ROTH. Springs that were delivered in the past that weren't fully tested, or where the certifications were inaccurate.

Mr. AHO. None of the products that I shipped were defective. What happened prior to that, I took no action.

Senator ROTH. Those are all the questions I have, Mr. Aho. Thank you.

Next we would call forward Peter Wanbaugh and Virgil Stites of G&H Technology.

Gentlemen, raise your right-hands. Do you swear that the testimony you will give before the subcommittee will be the truth, the whole truth and nothing but the truth so help you God?

Mr. WANBAUGH. I do.

Mr. STITES. I do.

Senator ROTH. Mr. Stites and Mr. Wanbaugh, would you please identify yourselves and describe your positions with G&H Technology.

TESTIMONY OF PETER M. WANBAUGH AND VIRGIL STITES, G&H TECHNOLOGY

Mr. WANBAUGH. My name is Peter Wanbaugh. I am the purchasing manager for G&H Technology of Santa Monica, California.

Mr. STITES. I am Virgil Stites, and my position is manager of product assurance with G&H Technology.

Senator ROTH. Mr. Stites, please describe the business conducted by G&H Technology.

Mr. STITES. Our business is that of making connectors and connection systems, that is connectors and cables, for the aerospace industry.

Senator ROTH. What part of your business is military related?

Mr. STITES. The special products division, all of it is military or space related.

Senator ROTH. Most of your business is as a subcontractor to a prime contractor?

Mr. STITES. Yes.

Senator ROTH. You do deliver some spare parts directly to the government.

Mr. STITES. That is correct, sir.

Senator ROTH. How long has G&H Technology purchased springs from The Spring Works and in what volume?

Mr. STITES. I think Pete can answer more directly than I can, but since approximately 1979.

Mr. WANBAUGH. We submitted figures that were given out over the period of years. I don't have them in front of me.

Senator ROTH. The accurate total purchases have ranged from \$3,000 to \$100,000 per year. Has G&H Technology continued to purchase springs from Spring and Wire Designs?

Mr. WANBAUGH. Yes, sir.

Senator ROTH. What was purchased in 1987?

Mr. STITES. 1987, currently, I think the figure is something like \$65,000.

Senator ROTH. We have here 71 separate orders for a total of \$53,000.

Mr. STITES. For the year to date.

Senator ROTH. There is a vote on so I will temporarily suspend the subcommittee.

[Recess.]

Senator ROTH. The subcommittee will be in order.

Mr. Rinzel will proceed with questions.

Mr. RINZEL. Thank you, Mr. Chairman.

I take it that G&H Technology, it is fair to say, Mr. Stites or Mr. Wanbaugh, has continued to do business with The Spring Works and Spring and Wire Designs during virtually the entire period that we have been discussing at this hearing in the last two days, that is, from July of 1985, when you first heard about this problem through the letter that you received from Mr. Rupp, up until the present time. Is that a fair statement?

Mr. STITES. We had a period of time when we had stopped placing any new orders with The Spring Works, and we were receiving continuing orders during that period of time.

Mr. RINZEL. How long was that period of time when you stopped placing new orders?

Mr. STITES. Several months, I believe six or eight months, until we were advised that it was a new company.

Mr. RINZEL. You were advised that it was a new company. How did you get that advice?

Mr. STITES. From Mr. Aho. We had received a request to come out and resurvey the company. One of my quality engineers went

out and made the survey, and he recommended that they be placed back on the approved list.

At that time, I indicated that I didn't think that it was in our best interest to do that until we understood what the company's situation was. Mr. Aho had requested to come and talk to us. I believe we had received a letter from Gary Peek as to the situation with regard to the new company at which time we had been convinced that it was a new company. We knew that Stuart Baron was still working for them, but we did not know of any connection with Mr. McCullough at that time.

Mr. RINZEL. Mr. Wanbaugh, you did receive a copy of the letter that we discussed with Mr. Rupp, dated July 3, 1985.

Mr. WANBAUGH. Yes, sir, I did.

Mr. RINZEL. It had a P.S. Pete that was directed to you.

Mr. WANBAUGH. Yes.

Mr. RINZEL. I take it you spoke to him on the telephone regarding this letter, and he sent you another copy of it. Is that what happened?

Mr. WANBAUGH. I believe so, sir.

Mr. RINZEL. Did you in fact turn this letter from Mr. Rupp over to Bill McCullough of the Spring Works?

Mr. WANBAUGH. At a later date, yes.

Mr. RINZEL. Why did you do that?

Mr. WANBAUGH. I would like to fill in a little background before then. Receiving the letter, which was a very serious and sensitive matter on both sides of the house, both quality and toward the buyer that he had indicated receiving gifts, I felt that, number one, I had to establish what was happening to us as a company, to the buyer side as well as the quality side, and also consider the credibility and the motivation of the sender.

There had been a past history of the previous employer of Mr. McCullough that we had done business with who had told me on three separate occasions that he would do business with Bill McCullough no longer or do business with us because we were doing business with Bill McCullough. Bill McCullough had taken all of his customers, his pricing, and so forth, so there was a lot of animosity against Bill McCullough.

I didn't know if this letter coming in was an irate employee, or if there was motivation from the previous employer, or what. When I received that letter, I wasn't really sure how sound it was. We initiated a resurvey of the company. I shuffled the prior assignments to, hopefully, preclude any activity, illicit activity, gift giving or taking, or whatever on that side of it.

With that background, you can better see my position in regards to that letter.

Mr. RINZEL. Quite frankly, I can't better see your position, because you didn't turn this letter over to the FBI or the Department of Defense, and you agree that it made very serious allegations.

Mr. WANBAUGH. No, sir, I did not.

Mr. RINZEL. You turned it over to the guy that Rupp was complaining about.

Mr. WANBAUGH. Eventually, approximately three months later.

Mr. RINZEL. With the result that Bill McCullough hired a private detective to follow Mr. Rupp around and try to get something on him.

Mr. WANBAUGH. I didn't know that that was going to be the action. But this letter was put on the street and sent to a handful of prime companies as well. This was public knowledge.

Senator ROTH. I must say, I am perplexed by what you are saying. You acknowledged having some information that raised some very serious questions with regard to Mr. McCullough.

Mr. WANBAUGH. Yes, sir.

Senator ROTH. Yet, he is the one you turned the letter over to. It is a remarkable way of investigating. Certainly, this letter is a pretty serious effort to document the charges that are made. I am sure that you do get letters from disgruntled employees but, number one, I think that it is unusual to get anything so well documented; and secondly, putting that together with the fact that you knew McCullough had some serious questions raised about his character, it would seem to me that rather than turn to him, you would have turned to the Department of Defense. I don't understand your reasoning.

Mr. WANBAUGH. It is a fair question, Senator. That letter was addressed to half a dozen large companies, prime people as well. It was on the street. It was public knowledge. Again, I didn't know what the motivation was behind this.

Senator ROTH. Let me ask you this. Were you going to ask Mr. McCullough about the motivation behind the letter?

Mr. WANBAUGH. As it happened later on, with discussions with Bill McCullough when he mentioned that this letter had been out and I indicated that I received the letter, we discussed and he, obviously denied all of the charges that were in that letter.

I had indicated that, yes, I had received the letter. He made the statement that his previous employer was out to get him, and disgruntled employees, and made all kinds of excuses that, obviously, turned out to be false, but I didn't know at the time. The letter being available, he asked me if he could have that copy, and I made a copy available to him.

Mr. RINZEL. Pursuant to a subcommittee subpoena issued to G&H Technology, we have received a letter from your files that is dated June 9, 1986, signed by Mr. Stites. It is directed to Rockwell International Space Transportation Systems. The letter states, in part, "G&H Technology was first informed about a possible problem associated with The Spring Works by telephone from another G&H customer in early October 1985. Our investigation was initiated at that time."

That statement is not true, is it, Mr. Stites?

Mr. STITES. No, it is not true. We did receive first the letter. I did not get a direct copy, but I did see a copy from Mr. Rupp, and we started our investigation at that time in terms of another survey of the facility.

The investigation of the specific parts, we also started in terms of reviewing what testing we had done on receipt of parts, and we had parts that we had only certifications which we pulled from stock and ran additional tests.

Mr. RINZEL. Your letter to Rockwell refers to two parts for the Space Shuttle supplied by G&H which contain springs manufactured by The Spring Works, and these parts are called "cryogenic plugs." Am I pronouncing it correctly?

Mr. STITES. Yes, cryogenic plugs.

Mr. RINZEL. Please explain their function and the use of springs in these plugs?

Mr. STITES. In the case of the cryogenic plugs, they are a small flat spring that applies pressure from the plug toward the receptacle for completing the EMI shielding between the plug and receptacle.

Mr. RINZEL. Cryogenic means that the plug has to be able to operate in extreme temperature variations?

Mr. STITES. That is my understanding, yes.

Mr. RINZEL. Your letter to Rockwell recommended no action because you said that your own investigation revealed no discrepant hardware. Is that correct?

Mr. STITES. That is correct.

Mr. RINZEL. Isn't it true that the only test G&H generally did on these springs was a hardness test? You didn't do any chemical composition test to see if material had been substituted, like a lower grade of steel.

Mr. STITES. We normally do testing of chemical and physical verifications of material, and we also do hardness tests to verify that not only it is the right material, but it is heat treated correctly. I don't know, on these specific parts, whether the chemical analysis was performed or not, sir.

Mr. RINZEL. You do not know?

Mr. STITES. I do not know.

Mr. RINZEL. Did G&H ever contact any of its customers about the certification problems in The Spring Works spring?

Mr. STITES. I talked to other customers who had initiated questions of us.

Mr. RINZEL. That is not my question.

Mr. STITES. I am sorry.

Mr. RINZEL. You sent us a letter showing a partial listing of all the many projects that The Spring Works parts had gone into.

Mr. STITES. Yes, sir.

Mr. RINZEL. Including Cruise missiles, submarines. Tell us other parts or other projects that you ended going into?

Mr. STITES. The Peacekeeper missile, the F-14, the F-18 aircraft.

Senator ROTH. What would the failure of one of these springs do to one of these missiles?

Mr. STITES. Normally, the spring is used as a part of the mate and demate of the connector. Our connectors, in some cases are unmated manually in terms of assemblies that are put together. Some of them are released by lanyard release, or pin puller release in flight between stages. In each case, in general, the spring is there to aid in the separation, that is, if the spring were not there, the part would still separate, but it would separate requiring increased force.

The spring in most applications is there to assist in that separation so that the amount of actual force that is required is less. This is not the only application, but that is the general application.

Senator ROTH. Could the failure of the spring cause the missile to not function properly?

Mr. STITES. Not to my knowledge, sir, but I don't believe I am qualified to answer that question. In some cases, I am not sure exactly where the connectors are used.

Senator ROTH. If you don't have knowledge as to the importance of these springs and their utilization, wouldn't it be important to notify your customers?

Mr. STITES. Yes, sir. Our indications were that what testing we had done, and based on the recommendations of our materials and process engineers and the design engineers, we did not find defective springs.

Senator ROTH. But at the same time, you did have notice, and you just testified that you are not certain what tests were made with respect to the spring, if I understood your testimony correctly.

Mr. STITES. That particular spring, that is correct, sir.

Senator ROTH. So you are not certain what testing had been done by your company and you did not know what the ultimate use would be. Wouldn't the proper thing have been to put your customers on notice?

Mr. STITES. It seems that way now, but let me identify those things that we do do in terms of tests. We test material samples. We test individual spring parts. We test them functionally on receipt on a normal sampling plan. We test all of our connectors at a final acceptance test, which usually includes the separation forces, the mating forces, electrical requirements such as dielectric and insulation resistance.

There is no question, had we found definitely defective springs, we would have carried that notification, identifying the places where they were used.

Senator ROTH. Maybe that is the case, but the record certainly leaves some gaping holes, as far as I am concerned. First of all, you testified here that you don't have knowledge as to what tests were made. Secondly, you testify here that you don't know what the ultimate utilization of these springs was.

It just seems to me that you are leaving an awful lot of risk, particularly when one keeps in mind that your colleague has testified that you had some knowledge of the character of the head of this organization. You had been put on notice that shortcuts had been taken. It hardly amounts to what I would call prudent management. Would you disagree with that?

Mr. STITES. Our prudence was based on what testing we believed we had done. In those particular instances, I said that I was not sure of the exact tests, because I have not in recent months looked back. At the time I responded to that, I believed that all the necessary tests were accomplished to assure that we did not have a problem with that part.

Senator ROTH. Before coming here, you didn't review the files?

Mr. STITES. I did not review that specific one, no, sir.

Mr. RINZEL. Does G&H have any plans presently to contact any of your customers on these projects, to advise them of potential problems with The Spring Works part?

Mr. STITES. Yes, we will, sir.

Mr. RINZEL. You are going to do that in the future?

Mr. STITES. Yes.

Mr. RINZEL. Is either of you aware that both owners of The Spring Works, Bill McCullough and Stuart Baron, were debarred, and that The Spring Works and Spring and Wire Designs had been suspended from contracting with the Department of Defense?

Mr. WANBAUGH. It became clear yesterday, sir. The debarment happened just recently, and it seems that that information is a long-time coming down. We found that out yesterday, and there is some confusion over the point whether it was and it wasn't, and when it was from all aspects.

Mr. RINZEL. Does G&H make any efforts generally to determine whether your subcontractors are debarred or suspended?

Mr. WANBAUGH. We have no mechanism for that, unless we go out and seek it.

Mr. RINZEL. The subcommittee heard testimony yesterday from the Deputy Inspector General of the Department of Defense, and his testimony suggested that all major contractors have this information at their fingertips.

Mr. WANBAUGH. That is nice, but in the trenches you don't get that information. It does not flow down. It is one of my suggestions, that we get better flow down of information concerning this.

Mr. RINZEL. What would you have done if you had been aware of the debarment status of at least Mr. Baron, who was debarred last year.

Mr. WANBAUGH. If that were true, then we would have taken appropriate action. Mr. Baron was the technical expertise of Spring and Wire Designs or The Spring Works.

Mr. RINZEL. In response to the subpoena, we received a copy of a memorandum, dated February 26, 1986, from Mr. Stites to Roger Stephenson. Who is Mr. Roger Stephenson?

Mr. STITES. Roger Stephenson is the vice president of our division, and I report to him, sir.

Mr. RINZEL. In this memo, Mr. Stites, you indicated that "the president, that is Bill McCullough, of The Spring Works has indicated that the company will probably reorganize under another name to make it possible for sales personnel to reopen doors in aerospace. He understands that the new name will be identified with them, and he has no intention of hiding that fact." Do you recall that memo?

Mr. STITES. Yes, I do, sir.

Mr. RINZEL. So you were aware, way back in February 1986, that McCullough planned to do this switch in name for the purpose of getting back into the aerospace contracting business, and they were going to maintain control. Is that a fair statement?

Mr. STITES. That is correct.

Mr. RINZEL. So when this name change came about and Wayne Aho suddenly appeared on the scene, you weren't really fooled by that, were you?

Mr. STITES. When I received that, I was aware of what was intended. I also, at the time that we did the survey, that is my very reason for recommending that we did not continue. When Mr. Aho came back in, I was convinced, and it is clear now that I should not have been, that he was operating a new company.

Mr. RINZEL. In this memo, you also said that "it is imperative that we limit our exposure to this kind of problem by placing our future orders with other suppliers."

Mr. STITES. Yes, sir.

Mr. RINZEL. You were overruled, evidently.

Mr. STITES. No, I wasn't overruled. We had developed some six additional suppliers of springs. There were one or two parts that we had been unsuccessful in finding other persons to bid on. When I was asked about going back with what I thought was a new company, we did the normal survey that we would do of a company, and we put them back on our approved vendor list. I can see now that it was a mistake, but at the time, I was convinced that it was a new entity.

Mr. RINZEL. Mr. Wanbaugh, David Rupp's letter alleged that monetary and gift gratuities to buyers as well as price fixing was taking place at The Spring Works. He specifically mentioned a G&H buyer. Did you look into those charges?

Mr. WANBAUGH. Yes, I did.

Mr. RINZEL. What did you do to look into them?

Mr. WANBAUGH. Basically, it is rather hard or difficult to go in and ascertain if there have been add ons to the pricing. Basically, the spring pricing is small. The orders are small. Normally they fall below \$1,000 level on the orders. At that level, they do not require that a justification memo be filled out with that size order.

There was a switch in buyer assignments to, hopefully, preclude any illegal activity going on that area.

Mr. RINZEL. The extent of what you did was to change the buyer; is that right?

Mr. WANBAUGH. Basically, yes.

Mr. RINZEL. You didn't do any further investigation?

Mr. WANBAUGH. I tried to monitor what was going on. As I said, it is difficult to ferret out any change or increases in prices.

Mr. RINZEL. I have no further questions.

Senator ROTH. Gentlemen, these are all the questions we have today. I have to confess that it seems to me that your conduct does not measure up to what I would call reasonable business prudence. What you are selling to the prime contractor is extraordinarily important. It puts at risk the lives and safety of American servicemen.

I can just say that other contractors, I think it was Rockwell who spent something like \$1.5 million just seeking to ferret out where these springs had been utilized. I would hope that companies such as yours would use more discretion in the future.

We would appreciate receiving, in the future, copies of notifications and to whom you send those notifications, to what customers. That is all.

Mr. STITES. Thank you.

Senator ROTH. The final witness is Mr. Guy Renfro, the Director of Contracting for AiResearch.

Would you raise your right hand, as well as the person accompanying you. Do you swear that the testimony you will give before the subcommittee will be the truth, the whole truth, and nothing but the truth so help you God?

Mr. RENFRO. I do.

Mr. STEVANUS. I do.

Senator ROTH. Mr. Renfro, I understand that you have an opening statement, but would you first introduce who is accompanying you?

TESTIMONY OF GUY RENFRO, DIRECTOR OF CONTRACTING, AI-RESEARCH, ACCOMPANIED BY CRAIG STEVANUS, MANAGER, PROCUREMENT QUALITY ASSURANCE

Mr. RENFRO. Yes, Senator, Craig Stevanus who is our Manager of Procurement Quality Assurance.

Senator ROTH. Thank you. Would you please proceed.

Mr. RENFRO. I would simply like to make a couple of comments, Senator, before we invite questions.

AiResearch and Allied Signal, Inc., which is our parent company, believe that as prime contractors and subcontractors to the government, we owe a special duty to the government to assure quality, conforming goods.

As noted on page 14 of your staff statement, upon learning of Mr. Rupp's letter about defective The Spring Works products, we acted promptly to test the products, alert the government, and alert our customers of the problem. Thereafter, we worked with the government and our customers to minimize any damage and disruption from the falsely certified Spring Works products. We are proud of our action, and I hope that it represents the standard and not the exception in the industry.

We will be happy to answer any questions that you may have.

Senator ROTH. Mr. Renfro, what does AiResearch manufacture?

Mr. RENFRO. AiResearch Division manufactures primarily environmental control systems, cooling turbines, mechanical actuators and various other subsystems for aircraft, marine and industrial use.

Senator ROTH. What did your sales amount to in 1986?

Mr. RENFRO. Approximately \$550 million.

Senator ROTH. How much of your business is with the Department of Defense?

Mr. RENFRO. It has been running somewhere between 55 and 60 percent.

Senator ROTH. Can you tell me what your responsibilities are?

Mr. RENFRO. I am currently manager of contracts, which requires that I am responsible for the contract administration of all the contracts we have, that I execute the majority of the contracts on behalf of the company, and be responsible for the negotiation of most contracts.

Senator ROTH. Mr. Stevanus, would you explain your responsibilities?

Mr. STEVANUS. I am the procurement quality assurance manager for AiResearch Manufacturing. I am responsible to participate, with purchasing, in the selection of suppliers, establish an approved supplier base, monitor the performance of those suppliers, and feed that information back to purchasing and our management.

Senator ROTH. We understand that you have certain so-called "approved suppliers." Would you explain what that means?

Mr. STEVANUS. Yes, sir. Approved suppliers are those suppliers whom we have surveyed to the various contract requirements, through quality systems surveys, as they are generally referred to. They are considered to be a capability survey of a supplier's quality system, his manufacturing system, and his inspection system. We flow requirements those consistent with our requirements and responsibilities to our customers.

Senator ROTH. Was The Spring Works an approved source and, if so, what type of products were they approved to supply?

Mr. STEVANUS. In 1980, we were requested to survey The Spring Works for wound wire spring products. We sent an individual to the facility. We looked at his record-keeping system and determined that his system had the capability of providing inspections, testing and manufacturing processes consistent with those products.

Senator ROTH. What were some of the items that you manufactured that included parts from The Spring Works?

Mr. STEVANUS. That we manufactured?

Senator ROTH. Yes.

Mr. STEVANUS. We perform assembly of fans, cooling fans, air conditioning systems, and cooling turbines, as Mr. Renfro has pointed out. Actuation systems, moving various surfaces and components in aircraft and a number of other products, such as small electric motors, for example.

Senator ROTH. Am I correct that some of your components in which springs from The Spring Works were installed went into the F-15, F-16, and F-18 jet fighters, the B-1 bomber, the A-6 attack aircraft, the PS3C antisubmarine aircraft, the C-5A, C-5B, C-130 cargo planes, and the advanced Cruise missile?

Mr. STEVANUS. Yes, that is correct. Those were the examples that we gave your staff.

Senator ROTH. Does your company have a procedure by which it checks up on its approved suppliers? If you do, would you please explain that procedure?

Mr. STEVANUS. Yes, sir. We have a staff of field source inspectors who go to the different facilities. They inspect the products at the facility. They look at the supplier's test reports and his inspection records.

We subsequently also have a receiving inspection staff of approximately 100 people. We subject parts upon receipt to chemical, metallurgical, and physical testing. Generally speaking, we test the samples of material submitted with those shipments. We do dimensional testing, and we do, in the case of springs, spring load testing.

Senator ROTH. Part of your testing is so-called "destructive testing"?

Mr. STEVANUS. That is correct.

Senator ROTH. What is destructive testing?

Mr. STEVANUS. Destructive testing is a program where we test a material sample submitted with a lot of products from a supplier. We send it either to our own chemistry lab and do metallurgical analysis and physical properties testing, such as tensile strength, or send it to an outside independent lab for the same type of analysis. In our factory, it is called a CMR, chemical metallurgical report. We have records of those on samples.

Senator ROTH. What about the springs from Springs Works, did you perform destructive testing on them?

Mr. STEVANUS. We performed destructive testing, as I mentioned, on the wire samples, primarily furnished on springs. Some of the springs are very, very small, and very difficult to get an accurate reading and accurate testing.

Our contracts to The Springs Works, as to our other suppliers, require a material sample to be furnished in the same condition and heat treat condition as the products shipped to us.

Senator ROTH. When did you find out about the problem with product substitution by the Spring Works?

Mr. RENFRO. We were advised. Craig Stevanus came to see me on September 18, after he had just learned of Mr. Rupp's letter. We had been alerted by a representative from another company.

We were also advised by that time by another customer that there may be some problem with certifications from The Spring Works.

Senator ROTH. Did you receive a copy of that letter of Mr. Rupp's?

Mr. RENFRO. We somehow never received ours. We were given a copy by another customer representative.

Senator ROTH. What did you do when you were informed about the problem?

Mr. RENFRO. On September 18, when we were informed, Craig Stevanus told me of the problem. He immediately initiated an investigation in which he took some sample certifications provided by Spring Works and had his people go to the process supplier, who actually performed the heat treat operations; they checked the certifications with the originals on file at the supplier's facility.

Senator ROTH. What did you find with respect to those certifications?

Mr. RENFRO. We learned that all six of them were erroneous.

Senator ROTH. They were erroneous.

Mr. RENFRO. They did not match the originals in the supplier's files.

Senator ROTH. What actions did you take then, when you discovered that these certifications were false?

Mr. RENFRO. The next thing we did, to be sure that we knew what we were dealing with, and that it wasn't perhaps sloppy filing on the part of the processor/supplier, or some other problem there, Mr. Stevanus' people took six certifications we had received directly from Industrial Steel Treat, who was the process supplier, and took them back to Industrial Steel Treat and checked them against the files there. It turned out that all six were correct. At that point, we decided that we had a problem with The Spring Works.

The next thing we did, upon learning of these results, was a call from me to the owner of The Spring Works, Mr. McCullough. It was our intention to ask Mr. McCullough to come to my office, at which time Craig and I planned to confront him with the information, and ask would he kindly explain this.

I called Mr. McCullough and asked for an appointment on October 7 in the morning. He asked that it be postponed until the afternoon, but he didn't show for the meeting. I called on October 8 to find out why he didn't show, and to ask him when he would kindly

come to see me. I learned that he couldn't come to the phone. They had some government people there.

I asked that they please identify the government people, because it was our intention, after confronting Mr. McCullough and his people with the information, to then go into those files to find out what kind of a problem we had. In other words, match his files against ours and the Industrial Steel Heat supplier.

I asked them for the name of the government people who were there. When they gave it to me, I called the number, and I found out that I was talking with the FBI, a special agent, who put me in touch with the DCIS.

Senator ROTH. Did you have to recall any products as a result of the product substitutions?

Mr. RENFRO. No, sir, we didn't. At the point where the files had been confiscated by the government representatives, we had no alternatives then but to pursue our own investigation; which meant that we had to pull all of our Spring Works parts out of stores, run some very exhaustive CMR testing on them, both in our own labs and outside labs. Then we also had to do some rather extensive failure mode and effects analysis by our engineering department to determine what would happen should this spring fail in a particular mode; so we could ascertain what kind of a problem it would give our component and, subsequently, the aircraft.

During all this time, we were in touch with our customers. It took us quite some time to complete all this activity. We eventually advised our customers of the situation, what our opinions were with regard to the failure mode of our components and the effect that it would have on the vehicles in which they were installed. Our customers determined at that time that there was no necessity to recall any of them.

Primarily, these are not serialized components—

Senator ROTH. What do you mean, "serialized"?

Mr. RENFRO. These springs, because they are fairly low cost, don't have serial numbers. It is impossible to trace them. We don't know where they went. We know the applications they are in, but we don't know where all these components are.

We were satisfied, as a result of our analyses, which we passed on to our customers, that there was no risk to crew safety or the vehicle mission from the use of this particular product. We based that on the fact, for instance, that none of our springs were used on primary flight controls.

All of our assemblies using these springs were functionally tested by us before they ever left. In other words, we put the springs into our components, and we functionally test them. Those tests are run by us, but they are witnessed by our customers and a DCAS representative. Most of the springs that would have probably failed in that functional test would have been replaced at that point.

We did extensive chemical and metallurgical analyses of the springs to determine which were good and which were bad. For the bad ones, we knew the failure mode in which they would fail as a result of our failure mode analysis. In almost all cases these springs, I am advised by our engineering department, should they fail, they would have no severe effect on the system itself. The component will still function. It may not function at the same rate,

perhaps; the spring rate may be a bit different, and so forth, but their function in our component is not critical to the normal operation of the component.

We would certainly have cooperated further with the customers, had they asked us to do anything.

Senator ROTH. You notified all your customers of where these springs were utilized?

Mr. RENFRO. Yes, sir.

Senator ROTH. You gave them the opportunity to view your data?

Mr. RENFRO. Yes, sir. We sent them all of the data we had, all of our test data and failure mode analyses, and so forth. We advised the DCAS as soon as we knew of the problem with The Spring Works, and the DCIS launched their own investigation. So our DCAS and other government people knew as well.

Senator ROTH. You mentioned that these are not particularly expensive items, but the fact is that you do pay a premium for these specialty springs. These are specially manufactured springs, in contrast to those produced commercially.

Mr. RENFRO. Our springs are high-priced, because they are built to military specifications.

Senator ROTH. I am not an engineer, but you said these springs were used in wing flaps and cabin pressure valves, aren't those critically important to safety, and couldn't they endanger both the equipment and the individuals?

Mr. RENFRO. Yes, Senator. As I indicated, if a leading edge flap on an F-16, for instance, failed it would certainly give the pilot a problem. However all of these components are designed fail-safe. The components are designed so that if the spring fails, it doesn't put the pilot or the aircraft in a compromising position. Little things like springs do break, and our design engineers understand that. The systems are consequently designed so that a single failure won't cause that kind of problem.

Senator ROTH. Since this problem with The Spring Works, has AiResearch revised its quality control procedures in any way?

Mr. RENFRO. Yes. Craig will answer that.

Mr. STEVANUS. After our experience with this, we began to realize the value of testing of specific parts as opposed to simply the material samples supplied by our subcontractors. We began to randomly seek out and verify certifications from processing houses, such as we had done in the case of Industrial Steel Heat. We take a copy of the certification given to us by our subcontractor and go and substantiate its validity. Those are two of the steps that we have taken specifically.

Senator ROTH. One of the things that has concerned me, from earlier testimony, is that Mr. McCullough was a pretty shrewd operator, and when it came to testing, he would find ways and means of having the prime contractor test qualified items, and then he would provide other items which were substandard since he knew they would not be tested.

How can we avoid that? Obviously, anyone who is going to deliberately misrepresent what is supplied is going to try to use means and devices to avoid being caught. If you know certain sample items will be tested, you can make sure that those will pass the test.

Doesn't it seem sensible that periodically the items which are actually supplied should be tested?

Mr. RENFRO. Yes, sir.

Mr. STEVANUS. Shortly after this incident, we began a program where we, AiResearch, select the part to be tested and we select it from the shipment of parts, not from any given sample.

Senator ROTH. What bothers me, and maybe your company learned a lesson from that, is how do we get this message home?

Mr. STEVANUS. Within the Garrett Companies, there is a Garrett procurement Quality Assurance Council, of which I am a member. The quality assurance managers throughout the Garrett Companies have shared in my lesson, so to speak, and have begun similar random testing programs.

Senator ROTH. Of course, we don't want to have to go through with this with each contractor and subcontractor. The question is: How do we alert the rest?

Mr. STEVENUS. We have had symposiums and conferences for those suppliers dealing directly with us, and we have encouraged them to do similar types of things in those conferences. Some of those conferences have included upward of 400 subcontractors.

Senator ROTH. How much did your analysis of these problems cost AiResearch?

Mr. RENFRO. We submitted our preliminary estimate to DCIS, when asked, of approximately \$160,000. It is probably grossly understated in hindsight, not only for the direct out of pocket, but for the disruption it caused.

Senator ROTH. Have you had any contact with a company called Spring and Wire Designs?

Mr. STEVANUS. Yes, sir, we were asked to survey them.

Senator ROTH. Are you doing business with them now?

Mr. STEVANUS. No, sir, we are not. They are not on our approved supplier list.

Senator ROTH. Did you conduct a survey of Spring and Wire Designs?

Mr. STEVANUS. Yes, sir.

Senator ROTH. What did you find?

Mr. STEVANUS. We used an upgraded survey form that we have developed in the last two years. We went through the question with them, and asked them for substantiating evidence to prove that, yes, in fact, they do test parts, they do control materials, and so on and so forth. We found a number of deficiencies which did not meet our requirements.

Senator ROTH. Because of those 19 deficiencies in Spring and Wire Designs' operations, you did not approve them as a supplier.

Mr. STEVANUS. That is true.

Senator ROTH. This is rather a paradoxical conflict with G&H who states that Spring and Wire Designs has met the requirements.

Do you have access to the list of debarred companies?

Mr. STEVANUS. I have not seen the list.

Mr. RENFRO. I am not aware of it either, Senator.

Senator ROTH. That is not provided in any way to those at the operating level.

Mr. RENFRO. I am not aware of it. If it exists in the company somewhere, I am not aware of it.

Senator ROTH. Do you have any suggestions for how industry and DOD can improve the quality assurance system?

Mr. STEVANUS. We feel that the existing system of military specifications and existing quality requirements are adequate, provided that companies implement them. In our own examples, we have taken additional steps such as random chemical and physical testing of parts. Steps such as random substantiation of certifications, visiting the suppliers or phoning them and inquiring about the original, receiving inspection testing, and stringent audits comparing records from the shipping level of a given company with the receiving level of a given company.

Senator ROTH. Would it be helpful to you in your positions to have a listing available of debarred contractors?

Mr. RENFRO. Yes, sir. As a matter of fact, as a result of these hearings, as soon as we can send our \$23 we will have one.

Senator ROTH. As I said earlier, I hope that not only you learned from this experience, but the defense industry as a whole.

Gentlemen, I thank you, and I appreciate the fact that you are here today.

The subcommittee is in recess subject to the call of the chairman.
[Whereupon, at 12:03 p.m., the subcommittee recessed subject to the call of the Chair.]

APPENDIX

STAFF STATEMENT

BY THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

PRODUCT SUBSTITUTION BY DEFENSE CONTRACTORS

OCTOBER 15, 1987

Introduction

The minority staff of the Subcommittee has been investigating the extent to which defense contractors and subcontractors are supplying the Department of Defense ("DOD") with substandard and defective products. The generic label for this problem is product substitution. What I mean by product substitution is the substitution of substandard or defective parts or the use of parts which have not been tested as required to demonstrate their safety and efficacy.

We looked at unscrupulous contractors and unscrupulous subcontractors, and we examined the DOD procurement system to see if the most effective procedures are being utilized to combat product substitution. This problem is one which could have severe consequences. The effect of substandard parts and

defective products in weapons systems, aircraft and other vehicles, for example, poses grave dangers to our service people, in addition to the obvious waste of valuable procurement funds.

The Investigation

Staff interviewed personnel within the Department of Defense (including the Defense Criminal Investigative Service ("DCIS") and the Defense Logistics Agency--"DLA," which is primarily responsible for DOD procurement and supply); representatives of large and small defense contractors (including procurement and quality control personnel); and representatives of the Department of Justice's Defense Procurement Fraud Unit ("DPFU"). We interviewed former government contractors who were involved in product substitution schemes, as well as the contractors and government personnel who were the victims of those schemes. We reviewed numerous documents, including product substitution case files. We also interviewed quality assurance representatives, both inside and outside the government, and representatives of trade associations and quasi-governmental bodies, such as GIDEP¹, engaged in efforts to ensure that the government gets

¹GIDEP is the Government-Industry Data Exchange Program. It is a cooperative activity between government and industry which exchanges technical data regarding the research, design, development, production and operational phases of various types of systems and equipment. GIDEP's primary objectives are to improve reliability, quality, productivity, safety and logistics support. Government prime contractors and subcontractors and government acquisition and support activities are participants who have access to four data interchanges including the Failure Experience Data Interchange ("FEDI"). It is through the FEDI that GIDEP sends alerts to its participants regarding problems which may result from defective or substandard products.

that for which it has contracted. In addition, staff visited the Naval Supply Center in Norfolk, VA, which is the largest military supply center in the world, in an effort to gain a full understanding of the operation of the military supply system. Finally, in an effort to track down a specific defective product which will be discussed later this morning in greater detail, staff inspected several Naval ships at the Norfolk Naval Base.

During the course of its investigation, we found that product substitution is, in fact, a significant problem facing the Department of Defense. The Secretary of Defense, in a March 30, 1985 letter to the Attorney General, identified product substitution as the top law enforcement priority of the Defense Department's criminal investigative units, and urged the Attorney General to "reiterate to all United States Attorneys that product substitution cases... be regarded as top priorities...." Responding in a letter dated April 24, 1985, the Attorney General advised the Secretary of Defense that all United States Attorneys had been notified that, "Secretary Weinberger has determined that fraud involving shoddy and substandard products is a... problem in defense procurement...." and that such cases should be treated as a priority.

The importance of product substitution cases was reiterated even more recently in a message from William F. Weld, Assistant Attorney General, Criminal Division, Department of Justice, to all United States Attorneys, dated August 17, 1987, stating: "The Departments of Defense and Justice have agreed to attach the highest investigative and prosecutive priority to product substitution cases--where the Department of Defense has been provided with substandard, defective or untested products."

The staff found that the product substitution problem facing the Department of Defense is not unique to any particular military service or any particular type of item. Rather, as an investigator from DCIS, the investigative arm of the Defense Department's Office of the Inspector General, told the staff, product substitution cases do not involve any particular product area as much as they involve a particular type of contractor who will engage in this type of scheme, often repeatedly.

How pervasive are these cases? The DOD reports that DCIS is currently investigating 231 active matters which may involve product substitution. And, according to DCIS investigators, a similar number of product substitution investigations were conducted by DCIS during each of the past several years. Further, between January 1, 1986 and October 15, 1987, 85 companies and individuals were indicted on product substitution-based charges. Deputy Inspector General Derek Vander Schaaf will testify this morning regarding the efforts

being made by DCIS, since its inception five years ago, to investigate product substitution cases and aid in the effort to prosecute those contractors charged with product substitution violations. Testifying along with Mr. Vander Schaaf will be DCIS Special Agents Sylvia Owens and Robert Koons, who handled the investigations of The Spring Works and Alchemy cases, respectively, which are the two product substitution cases on which this hearing will focus.

However, while the criminal investigative branches of each of the military services also conduct investigations into product substitution cases, only the Army responded to our request for the numbers of cases. The Army reported that, during the period 1985-1987, it conducted 164 product substitution investigations which resulted in 12 indictments, five cases being resolved through pre-trial diversion, and seven matters being resolved through administrative proceedings.

The range of substandard and defective products supplied to the Department of Defense runs from basic items like T-shirts to parts for complex aircraft and weapons systems. In this initial stage of the investigation, the staff focused on the product substitution matters handled by the DOD Inspector General's Office through DCIS. (The Department of Justice informed us that approximately 95 percent of its investigations stem from DCIS referrals.) In reviewing DCIS files of recently closed product substitution investigations, the staff found the following

examples of some of the types of defective or substandard products involved in these matters:

--M-27 fins to be used in 60 mm. mortar rounds;

--Breach bolts to be used in M-60 machine guns;

--Surgical instruments;

--Guidance fins to be used in Sidewinder missiles;

--Ballistic shields to be used in M60A-3 tank thermal sights;

--Flash suppressors, designed to conceal soldiers from enemy sniper fire, to be used on M16 rifles; and

--Aluminum castings to be used in the Navy Phoenix air-to-air missile and the F16 cockpit display unit.

It seems pretty clear what would happen if these items are defective. Our military personnel would be subjected to untold and unnecessary dangers. In addition, product substitution results in untold economic loss to the government. The staff was told repeatedly that it is almost impossible to accurately assess the cost of the time and effort that goes into tracing a defective part, disassembling the end use item it may be

installed in, testing the part and replacing it because so many different entities, in both the public and private sectors, are involved in tracking these problems down. What is clear is that product substitution results in time delays and additional costs to subcontractors, prime contractors and the government. This also results in our military personnel being placed at a severe disadvantage even when these defective parts are discovered because it delays the availability of the end use items to our military personnel in the field.

At this hearing, in an effort to provide a clear picture of what is entailed in a product substitution scheme, the Subcommittee will be presented with details of two product substitution cases which resulted in criminal prosecutions and convictions. These cases are typical examples of some of the ways in which product substitution schemes are perpetrated. They also point up flaws in the DOD procurement and supply system.

Cases

The atypical side of both of these cases is that the defendants in each case ended up serving time in prison and in one case received an unusually lengthy sentence. One of the problems which the staff discovered is that criminal defendants in product substitution cases seldom receive sentences of significant deterrent value. In most product substitution cases, the defendant does not have a prior criminal record, often pleads

guilty to lesser charges, and does not seem to be considered by courts to be a particular danger to society. The result, the staff found, is that they seem to receive uniformly lenient sentences. Mr. Vander Schaaf can address this issue more fully in his testimony, discussing a report issued in September, 1987 by his office. In addition to criticizing these lenient sentences, the report offers recommendations to aid in obtaining stiffer sentences. In this vein, the report stresses that courts should be advised of the potential adverse consequences of product substitution and the overall costs to the government, rather than focusing on the mere costs of the contracts at issue, which in most of these cases is relatively small by comparison.

Alchemy

The first case about which the Subcommittee will hear testimony primarily involves defective 2 1/2" fire hose nozzles which were manufactured by a small company called Alchemy, Inc. of Pennsburg, Pennsylvania. As its name suggests, Alchemy thought it had come up with a way to turn brass nozzles into gold for the company coffers by taking several shortcuts in the manufacturing process. Staff interviewed Leo Schweitzer, III, president of Alchemy, at the federal prison in Lewisburg, Pennsylvania, concerning his use of substandard materials to manufacture these nozzles. Although he lacked any engineering background, Mr. Schweitzer ignored the warnings of his machinists and other technical experts that the methods and materials he was

using would not produce a nozzle that worked. One of those machinists, Alexander Savicki, will testify concerning his experience at Alchemy. The effect of Mr. Schweitzer's use of inferior materials was that the large plastic ball inside the nozzle which regulates the flow of water did not work. The defective nozzles were first discovered during a firefighting drill aboard the USS Fulton in 1982. The nozzles were subsequently tested by the Naval Engineering Laboratory in Seal Beach, California. Seventy percent of the nozzles tested failed on first use and experts told staff that, even if the nozzle worked initially, it was just a question of time before it would fail. That failure meant the nozzle handle was stuck in either the "On" or "Off" position.

These nozzles are nearly a foot long and weigh 14 pounds. They are used primarily on Navy ships and Navy personnel told staff that they are found almost exclusively at firefighting stations where large fires are more likely to occur, mostly at external locations. Navy personnel also informed staff that these large nozzles require a five man firefighting team to handle the hose and nozzle. When the nozzle is turned on, it produces 100 pounds per square inch of water pressure. With that kind of intense pressure being produced, when these nozzles could not be turned off as a result of these bad parts, they turned from a lifesaving device to a life threatening device. And if the nozzle got stuck in the "Off" position and could not be

turned on in the face of a fire, the nozzle was equally life threatening.

A fire on board a ship at sea loaded with fuel and weapons is a terrifying enough prospect without having to worry about whether the firefighting equipment will work. Yet that is exactly the dilemma which many of our naval personnel may have faced as a result of the efforts of Mr. Schweitzer to squeeze a few more dollars of profit out of his contract with DLA to manufacture these nozzles.

Alchemy did not just make bad nozzles. The company also manufactured substandard check valves to be used in the ejection seat mechanisms of the F4 jet fighter and fire hose applicator tubes, for which it billed the government without having ever delivered the products. Overall, Alchemy sold the government more than \$400,000 worth of substandard products. Mr. Schweitzer was convicted in 1985 of six counts of false statements and eight counts of mail fraud and he was given one of the stiffest sentences ever meted out in a product substitution case, 15 years in prison.

The staff's investigation of the Alchemy case also revealed an apparent problem in the Defense Department's capability to track down defective products once they have been identified. After all, identifying a faulty product is only half the battle. If that product cannot be located and repaired or replaced, then

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our military personnel cannot be assured that their lives are not endangered by these faulty products.

In the case of the Alchemy nozzles, nearly 3,500 substandard nozzles were purchased by DLA. In addition to the obvious problem of how that many bad nozzles got into the supply system in the first place, in the five years since these defective nozzles were first identified, the Navy can account for only about one-third of them.

Staff went to our largest naval base, the Norfolk Naval Base, and inspected the firefighting equipment of several ships and discovered an Alchemy nozzle remaining on board the USS Nassau, an amphibious assault ship which carries helicopters, amphibious assault vessels and a contingent of Marines and is heading for duty in the Mediterranean. The staff also interviewed Lt. Comm. Wrynn, chief engineer aboard the USS Sylvania, who recalled encountering defective Alchemy nozzles when he served on the USS Butte, a weapons ship. There, he recalled, they had at least six bad nozzles made by Alchemy.

After my visit to Norfolk, the Navy put out an Alert to all of its commands regarding these nozzles. Rear Admiral Abele is here to testify about the responses to that Alert, as well as to discuss the problem of tracing defective products down to end users and the system currently in place to accomplish that goal.

The Spring Works

The second case which this hearing will focus on involves a company called The Spring Works, located in South El Monte, California. The Spring Works was a small machine shop (10-12 employees) which manufactured specialty springs primarily for the aerospace industry. The Spring Works supplied these specialty springs to DOD subcontractors who used them in aerospace component parts which were purchased and installed by the large aerospace prime contractors. Among the component parts which utilized these springs were hydraulic actuator valves for braking systems, landing gear, wing flaps, weapons doors and cabin pressure valves. The end use aerospace items which incorporated these components included the Space Shuttles Atlantis and Discovery; the F-14, F-15 and F-18 jet fighters; the A-6 attack aircraft; the B-1 and B-52 bombers; the C5A, C5B and C130 cargo planes; the P3C anti-submarine aircraft; the Peacekeeper, Minuteman, Pershing, Titan III and Cruise missiles; the CH-47 helicopter; and the machine guns on the Apache helicopter. (Attached is a chart showing some of these items.)

The Spring Works was owned by William McCullough and Stuart Baron. We will hear testimony from the former Quality Control Manager of The Spring Works, David C. Rupp, who was responsible for alerting individuals who alerted authorities as to the scheme being perpetrated by The Spring Works. Mr. Rupp will describe the pattern of product substitution which the owners of The Spring Works used from 1978 to 1985 in supplying specialty

springs to the aerospace industry. Mr. Rupp will also relate how the company used substandard materials and failed to perform additional necessary processing on these springs and then covered up by submitting falsified certifications attesting that the material was to specification and all required processing had been properly performed. The cost to the government and private industry of tracing these springs, disassembling components, testing and replacing them, where necessary, was estimated to be at least \$2 million.

On April 6, 1987, after having pleaded guilty to conspiracy and false statements charges, Mr. McCullough was sentenced to seven months in prison and Mr. Baron received a five-month sentence. Both are out of prison now but, through their attorneys, declined to be interviewed. During the course of investigating this case, staff discovered that a successor company to The Spring Works, called Spring and Wire Designs, was operating at the same location, doing the same type of business and employing some of the same personnel, including Mr. Baron, upon his release from prison. The staff also found that, upon his eventual release from prison, Mr. McCullough was orchestrating an effort to retain control of this company, despite the fact that McCullough and Baron have both been debarred and proceedings are underway to debar the company from future government contracting. The owner of Spring and Wire Designs, Wayne Aho, will testify concerning Mr. McCullough's

efforts to pick up where he left off by getting back into the aerospace spring business.

The Subcommittee will also hear testimony from representatives of two companies which were customers of The Spring Works. These companies responded very differently to the news of the product substitutions being performed by The Spring Works. After being informed of the problem by a customer, Garrett AiResearch conducted an internal investigation, found falsified certifications submitted by The Spring Works, stopped using them as a supplier, and informed DCAS. G&H Technology, on the other hand, after receiving a detailed letter marked "Personal and Confidential," from David Rupp, replete with documentation corroborating the letter's allegations that The Spring Works was performing product substitution, not only failed to turn the letter over or otherwise inform the authorities and stop doing business with The Spring Works; rather, G&H Technology turned the letter over to William McCullough, president of The Spring Works and the person the letter accused of authorizing these illegalities, and continued to do business with The Spring Works. Further, while G&H Technology has continued to do business with Spring and Wire Designs, Garrett AiResearch conducted a quality survey inspection (at the request of Spring and Wire Designs) of the company's facilities and procedures and, finding 19 deficiencies, did not accept Spring and Wire Designs as an authorized supplier.

DOD Quality Assurance SystemA. Before DOD Accepts Goods

The Department of Defense employs a multi-level quality assurance system in an attempt to discover substandard products before they make their way into the system. For its contracts, DLA coordinates quality assurance through its Defense Contract Administration Services ("DCAS") arm. DCAS supervises the quality assurance representatives ("QARs") who are the individuals who actually inspect products prior to their being accepted by DLA. Staff found that QARs are either located in the manufacturing facility of large DOD contractors (called resident QARs, of which there are 1,085) or visit numerous smaller contractors in a particular geographic region. The latter group is called non-resident QARs and there are approximately 17,000 currently employed by DLA. In addition, each of the military services has its own contracting section and its own quality control representatives to cover contracts for goods unique to that service.

One problem on which industry representatives and DOD personnel agreed was that the majority of the QARs are underqualified for such an important task. These people are usually not engineers, receive only limited training and are faced with a vast array of different types of products to inspect under intensive time pressure to get the goods completed on

time. Another problem is that the QARs' salary range does not normally permit them to be promoted above a GS-11 (in the case of a non-resident QAR who is responsible for very complex commodities) or a GS-12 (in the same case for a resident QAR). That is a particular problem in retaining QARs when they can make more money in the private sector. In 1986, for example, QARs suffered a 14 percent attrition rate.

DOD does have a system in place to check on the quality of the goods it purchases. This system includes provisions for the inspection of goods prior to receipt by DOD. However, there are certain permissible shortcuts within the system which it is within the discretion of the QAR to invoke, normally in the case of less complex goods and manufacturers with histories of reliability, to cutdown on the turnaround time in which goods are inspected and accepted. If overutilized, these shortcuts could weaken the quality control system.

Essentially, there are two circumstances in which the DOD does not inspect the goods it receives from contractors. One such instance which staff discovered was that many orders are accepted by QARs on a Certificate of Conformance ("COC") basis. These are used in cases where the QAR determines that a contractor has been responsible in the past. In these cases, the QAR signs a Form DD 250 (by which the government takes title to goods) solely on the basis of a certificate submitted by the contractor which states that the items conform to the contract.

There is no inspection of the goods themselves, and there is no verification that the certifications submitted along with the products are valid, although if it turns out that the items were not properly produced or were faulty, the government can correct the problem later. As you will hear today from the witnesses testifying concerning the Alchemy and Spring Works cases, it is very easy to falsify certifications. Therefore, relying on such certifications as the basis of DOD's quality control system, seems to be an uncertain method of maintaining quality control.

Second, if the government determines it is worthwhile (there is sufficient discount), it can utilize the "fast pay" system. The "fast pay" procedures allow contractors to obtain payment from the government in certain circumstances before the government verifies that the products have been received and accepted. Usually this results in payment being tendered within 30 days after the contractor informs the government that the products have been shipped. There is no inspection. The conditions for use of the "fast pay" system include: (1) the contract must be for less than \$25,000; (2) the contractor must be deemed responsible; (3) the government supply depot and the contractor must be far enough apart so as to make verification time excessive; (4) the items are generally standard items; (5) the contractor must agree to a warranty provision which allows the government to recover later for any deficiencies; and (6) it must be a fixed-price contract.

B. Discovery of Product Substitution After DOD Has Accepted the Goods

Instances where DOD discovers cases of product substitution only after it has accepted the goods present a two-pronged problem. First, DOD must alert its various branches as to the potential problem, track down the items, and either repair or replace them, since safety is always of primary concern. Then, the focus shifts to how to sanction the offending contractor.

1. Alerting the Users

After substandard or defective parts have contaminated the DOD supply system and been distributed to end users, staff found that tracking them down can be almost impossible, especially with generic items, manufactured by more than one source. Staff found that there is a system to trace the product, but only until it is delivered to its respective bin in a supply center. Once an item is requisitioned and sent from the supply center to the end user, it is practically impossible to ascertain which manufacturer's widget was sent to fill that requisition. This is true for the vast majority of items in the DOD supply system. Only certain types of items, few in number and called "Level One" items, are deemed to be of such a critical nature (usually either for security or safety reasons) that they are subject to 100 percent traceability.

Once a problem is discovered with a product already in the DOD supply system, the contracting entity within DOD (either DLA or one of the services if it is an item unique to a particular service) sends an Alert to the commands which would be end users of that product. It is then up to each command to determine its response, such as either immediately replacing the part in question or waiting until the next scheduled maintenance period. This determination is usually based upon the degree of "criticality" presented by the substandard part. Once the parts in question are returned to various turn-in points throughout the DOD supply system, they are frozen in "Condition L" (litigation) pending the resolution of the matter. At the conclusion of the case, the defective parts are then "demilitarized" or destroyed to prevent them from finding their way back into the supply system.

Another way in which end users can be notified of substandard or defective products is to receive a GIDEP Alert. These Alerts are sent to all participants in the GIDEP program. However, staff found that major commands within the DOD supply system were not participants in GIDEP even though there is no cost involved to participants and even though the program is actually administered by the Navy. Apparently, many important commands within the DOD supply system are not familiar with GIDEP and, therefore, are not taking advantage of this vital resource.

2. Sanctions

As for punishing the wrongdoer, there are several sanctions available to the government. First, the government can and does prosecute under a number of different criminal statutes, usually for conspiracy or for filing false statements (or claims), and occasionally for mail or wire fraud or bribery of a public official. The Department of Justice has a unit, the Defense Procurement Fraud Unit, which handles some (usually larger) cases. Ninety-five percent of the cases referred to the Department of Justice come from Defense Department investigations. Most of the cases are handled by United States Attorneys' offices around the country.

The law enforcement officials agree that the major problem in the system is the sentencing; that is, that no matter how strong a case they have, the defendants receive sentences which are simply too lenient to serve a deterrent purpose. Most of the statutes used, 18 U.S.C. Sec. 287, 371, 1001, 1341, have five-year limits on incarceration. Only one, 18 USC, Sec. 286, conspiracy to defraud the government with respect to claims, has a 10-year penalty. The sentence which Leo Schweitzer III received stands in marked contrast to the usual experience.

Second, after notice and hearing, the government can debar (or temporarily suspend) a contractor for a number of reasons, including a criminal conviction, fraud or other actions indicating lack of business integrity. GSA publishes a list of

debarred and suspended or ineligible contractors, and the agencies are not supposed to contract with these companies, their owners or specified affiliates.

Currently, no regulation prohibits the government or the contractors from dealing with subcontractors who are debarred or suspended, except the government may require, as part of a contract, the right to consent to a subcontractor. A regulation has been proposed that would extend the prohibition to subcontracts over \$25,000.

New regulations would require contractors to certify that they are not debarred or otherwise ineligible. This is important, because the GSA debarment list is not up to date.

In sum, with the new regulations, the Department of Defense will not be able to contract with debarred contractors or with debarred subcontractors if the contracts exceed \$25,000. It could theoretically contract with people who subcontract with debarred companies/persons if the contract is for less than \$25,000. It has been suggested that this is a reasonable threshold, because (1) there are very few subcontractors in this category, and (2) the paperwork and other administrative burden involved would exceed the cost of problems encountered by doing business with these people. However, these justifications appear dubious, and many of the criminal product substitution cases involve contracts of less than \$25,000. The Defense Logistics

Agency reports that during 1986, there were 46 debarments and 57 suspensions for cases involving CM/UPS (counterfeit material, unauthorized product substitution).

Third, the government can also proceed against the wrongdoers by initiating a civil action for damages or, under the new Program Fraud Civil Penalties Act of 1986, an administrative action for claims below \$150,000. I understand the regulations for such proceedings have been developed and are about to be finalized.

At this time, I would like to introduce into the record materials (both sealed and unsealed) relating to the two cases which will be the focus of this hearing and other documents obtained during this investigation.

I would be happy to answer any questions.

STATEMENT OF
MR. DEREK J. VANDER SCHAAF
DEPUTY INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
BEFORE THE
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
OCTOBER 15, 1987

Mr. Chairman, Members of the Subcommittee, I am particularly pleased to be here today to contribute to your review of what is an important issue--that of defective, substandard, or substituted parts supplied to the Department of Defense by unscrupulous contractors. I have with me today Special Agents Sylvia Owens and Robert Koons to answer specific questions regarding two closed investigations.

As you are aware, the Office of Inspector General, Department of Defense is charged with the responsibility to uncover waste, increase the efficiency of our buying programs, inquire into improprieties by Department personnel, and conduct criminal investigations of alleged wrongdoing which impact on our ability to defend the Nation's security interests. Indeed Mr. Chairman, you and Senator Roth were advocates of the creation of an Office of Inspector General for the Department of Defense.

Since the creation of this organization, we have conducted literally thousands of audits, inspections, and investigations of departmental programs.

From the very start, we set as our primary target procurement fraud. We made a conscious decision not to duplicate existing investigative programs. We will investigate general crimes such as homicide, drugs, and thefts when they come up and we are the only available investigative agency, but most of those are handled by the Military Departments. Instead, we have concentrated on fraud and corruption in the procurement process, and from the beginning, our number one priority in the procurement fraud area has been product substitution.

Product substitution is the generic term we use for any situation in which the item delivered under a DoD contract is not up to specifications. This may take a number of forms, such as, below specification components, inadequate or no required

testing, etc. The importance we place on this area was demonstrated in an exchange of correspondence between the Secretary of Defense and the Attorney General, both the DoD and Department of Justice have mutually agreed that product substitution is the most important law enforcement problem confronting DoD in the fraud area. In addition, I have personally written to each U.S. Attorney to encourage prosecutive actions designed to maximize sentences in product substitution cases.

The Army uses a poster which I often refer to when I speak to members of the procurement community. It has a picture of a soldier in battle gear with the legend "What have you done for him lately?" That, to me, epitomizes the reason for our commitment to pursue product substitution issues vigorously.

Our Military Service members depend on the equipment we provide to carry out their missions. Their lives depend on it.

Our national security depends on it. Cost mischarging and defective pricing cases are unquestionably important. But we probably won't lose a battle due to overpriced goods. On the other hand, if the manufacturers of one of our mortar rounds decides to cut corners and substitutes a defective part for the one required in the contract specifications, that mortar may fly off target, or it may explode in its launcher.

To assure ourselves that those who need to know about defective products get the word quickly, we have established a procedure whereby substantive allegations involving defective goods result in safety alerts being distributed to all affected DoD activities.

I'd like to share with you some of the initiatives the Office of the Inspector General has taken and highlight other aspects of our work in the product substitution area.

Primarily, we have focused on aggressive criminal investigations and prosecution of offenders for substituted and defective products.

Since January 1986, the Defense Criminal Investigative Service (DCIS) has indicted 85 individuals and contractors who were found to be involved in product substitution schemes. Currently, the DCIS is carrying 231 open product substitution investigations. I'd like to summarize just a few of our completed criminal investigations for you today. In order to give you a better flavor of what I'm referring to with respect to each of these cases, I've brought along some actual parts used as evidence during the course of our investigations. Your staff has also made an in-depth inquiry into some of these individual cases.

The first case I would like to highlight was one of our initial product substitution investigations. It involved

allegations made through our DoD Hotline against the Rausch Manufacturing Company of St. Paul, MN.

The Rausch case is illustrative of some of the problems that can be encountered in a product substitution investigation, and it is for that reason I find it instructive. We learned a great deal about how to solve problems DoD and contractors have in product substitution cases.

Rausch Manufacturing Company, Inc., located in St. Paul, MN, is an example of deliberate fraud by a contractor. Rausch was hired to produce aluminum castings used in seekerheads of the U.S. Navy Phoenix Missile, the AIM-54. As you know, the Phoenix Missile is an air-to-air weapon designed to provide a first line of defense against aircraft attacking the fleet.

Rausch was one of the two original suppliers of seekerhead castings and subsequently became the sole source after 1979.

This contractor falsified documents showing the castings were produced from virgin ingots of type A-357 aluminum; whereas, in fact, remelted aluminum was used. Castings were also being welded to conceal irregularities and other defects. Rausch went so far as to conceal cosmetically the welds prior to shipping the castings to the Government's prime contractors. Additionally, testing reports were falsely certified. Rausch also conspired to deliver to the Department of the Air Force, substandard parts produced for use in the TRAC 170 air transportable radio antennas for the Air Force. The company was ultimately convicted for its fraudulent actions involving these parts.

As a result of our investigation, the company's president and another director pleaded guilty to three counts of conspiracy to defraud and four counts of false claims against the Government. The president was sentenced to 2 years in prison. The second officer was sentenced to 18 months in prison. The company and the responsible individuals were disbarred.

The Spring Works, Inc., of El Monte, CA, devised a scheme to defraud the Department by substituting inferior springs. To conceal the substitution, the Spring Works falsified both material and manufacturing certifications. Large amounts of inferior springs were sent to major contractors as well as to subcontractors. These springs were used on the front landing gear strut assembly unit of the CH-47 Helicopter, as well as the Cruise Missile, the F-18 Fighter, and the B-1 Bomber. Safety alerts were issued to all users early in the investigation. We believe there is a high probability these critical applications would have failed catastrophically over a period of time, thus affecting the safety of military personnel as well as the readiness and effectiveness of our national defense.

The president and vice president of Spring Works were indicted on one count of conspiracy and three counts of false statements. Both were sentenced to serve prison terms, pay fines, and perform community service. The company and the

responsible individuals have been suspended indefinitely, and a debarment decision is pending.

Diversified American Defense, Inc., located in Boaz, AL, was another contractor investigated by our office. This contractor was found to have schemed to ship defective M27 fin assemblies to the Army. These assemblies are used on 60mm mortar rounds to stabilize the round during flight. The defects on these fins cause erratic flight, posing a life threatening danger. The investigation disclosed that the vice president of Diversified American Defense directed employees to pack and ship defective parts. He even falsified documents stating that certain tests had been accomplished, when in fact, they were not conducted.

Testimony was also obtained that indicated that the vice president broke into the office of the Department of Defense Quality Assurance Representative (QAR) at night for the purpose of switching defective parts with parts he believed would pass

inspection. While in the office he discovered that the QAR had rubber stamped each of the sampled parts. He then proceeded to fabricate a rubber stamp to imitate the QAR stamp and switched many of the parts. Fortunately, the QAR became suspicious and reported his suspicions to DCIS.

As a result of our investigation, the company and its vice president pleaded guilty to felony fraud charges. The vice president was sentenced to 1-year and 1-day imprisonment and the company fined \$750,000 and ordered to pay restitution of \$150,000. Both were debarred from doing business with the Government for 8 years for what the presiding judge called "a callous disregard for the lives of others."

MKB Manufacturing Corporation, located in Deer Park NY, is a particularly disturbing example of a contractor lining its pockets at the expense of the American taxpayer and without concern for safety of American soldiers. Our investigation

disclosed that the owner of MKB deliberately deceived a Government QAR by switching samples of gas pistons for the M-60 machine gun which it was producing under contract. The gas piston's function is to channel spent gases to eject the fired round and chamber the next.

In this instance, the QAR was alert enough to suspect a problem and assisted the investigators in uncovering the full scope of the scheme. It was found that the owner deliberately falsified numerous invoices and other documents. It concealed manufacturing flaws and failed to even attempt to perform critical processes on other parts. Army munitions experts advised that 100 percent of the sample parts examined contained defects serious enough to cause the machine gun to jam immediately or after firing a few rounds. Following his guilty plea, the owner was sentenced to serve 18 months in prison. As in the other instances I've related, the company and owners were also debarred from doing Government business.

Waltham Screw Company, a machine shop located in Keene, NH, and two of its employees were found to be defrauding the DoD by intentionally subverting the Government quality inspection process and shipping defective flash suppressors for the M-16 rifle. A flash suppressor is a device which screws onto the end of the barrel of a rifle and serves to diffuse the flash in order to make the soldier firing the weapon less visible to the enemy.

The suppressors shipped by Waltham Screw had been poorly manufactured and were so far out of specification as to cause the suppressors to be almost worthless. In this case, the scheme was first brought to light by a company employee who reported the matter and cooperated in our investigation and the eventual prosecution. Following a jury trial, Waltham Screw and the two employees were found guilty and sentenced. The plant manager was sentenced to 1 year in prison. The company was fined \$125,000. All convicted defendants were debarred from Government business.

Alchemy, Inc., located in Pennsburg, PA, used three schemes to defraud the Government by providing defective products.

Through the use of substandard materials and cost-cutting manufacturing procedures, Alchemy provided the Government with nearly 4,000 water-fog nozzles which had a failure rate of more than 70 percent. False billings for 540 water-applicator tubes under another contract comprised the second scheme which also involved the tendering of defective products. The water-fog nozzle and water-applicator tubes were being purchased from Alchemy, Inc., for Navy use in fighting shipboard fires. The third scheme involved a contract between Alchemy, Inc., and the Air Force under which Alchemy falsely represented that they were providing a valve manufactured by an approved source in California. The valve was actually manufactured at Alchemy, Inc., using insufficient and outdated specifications and drawings. The valves were intended to be used in the pilot's

ejection system of the F-4 jet fighter aircraft. Failure of the valves could have resulted in serious injury or death.

The company president, Mr. Leo Schweitzer, III, was convicted on six counts of false statements and eight counts of mail fraud. He was sentenced to 15 years in prison and ordered not to participate in Government contracting for 20 years. Schweitzer was ordered to make restitution to the Government in the amount of \$433,254.

SUMMARY

These are but a few examples of schemes used by unscrupulous contractors who place profit before integrity and our national security. Other schemes include the illegal substitution of foreign made (and often inferior) parts in place of required U.S. made parts and material. One such problem involving counterfeit bolts was recently addressed by my Assistant Inspector General for Investigations at a hearing before the House Committee on

Energy and Commerce, Subcommittee on Oversight and Investigations, the falsification of test data, the "salting" of shipments by using a layer of high quality items to conceal parts of poorer quality and perhaps most troublesome, attempts to subvert the inspection process by offering bribes to Government inspectors.

The picture I've painted for you today is obviously not a pretty one. Still I would be remiss if I did not put these incidents in perspective. Although there are literally hundreds of cases involving product substitution, these cases represent only a small portion of the number of contractors doing business with the DoD. The majority of our DoD contractors are hard working, dedicated citizens who strive honestly to supply DoD with a quality product. It is the bad apples, however, who draw publicity and it is those bad apples that we are determined to pursue.

In addition to aggressive criminal investigations of product substitution schemes, we have also concentrated many of our audits and inspections on the area of Government quality assurance. The Government quality assurance specialist is the lynch pin; they assure that items accepted by the Government meet all contractual requirements. If our quality assurance programs aren't working, and as a result, we fail to detect substituted or nonconforming parts, they end up where we don't want them--in use by our troops.

Among our initiatives designed to prevent product substitution, the following have been undertaken:

- o Based on our recommendation and at the direction of the Secretary of Defense, a program was instituted to provide fraud awareness training for all quality assurance personnel within DoD.

o Briefings on indicators of product substitution are regularly provided by representatives of the Office of Inspector General to procurement personnel, including Quality Assurance staffs.

o Fraud Awareness Letters, including one in August 1987, have been issued to procurement personnel identifying cases involving product substitution.

o Inspector General auditors did a preliminary analysis of product substitution investigations and identified 5 indicators of potential quality assurance problems: past history of poor performance, unusually low bids, negative preaward surveys, violations of the Buy America Act and use of Fast Pay Provisions. We are continuing to analyze product substitution cases.

We also have an ongoing audit project to look at the extent of nonconforming products in the DoD supply system in terms of

number and dollar value of items, potential harm to personnel, and degradation of equipment.

I will submit for the record a synopsis of our audit work relating to product substitution as well as that of the General Accounting Office, showing the status of actions being taken by Department managers in response to those reports. Each of these actions is being tracked by my Audit Followup office.

As you can see, Mr. Chairman, DoD, in partnership with the Department of Justice, is aggressively pursuing prosecutions of procurement and product substitution cases. Providing Armies with nonconforming products or defective items is not a new problem. Although such schemes have been with us for a long time, I firmly believe they can be controlled and checked through aggressive inspection and investigative programs. We intend to keep the pressure on those who attempt to perpetrate these fraudulent schemes against DoD.

Mr. Chairman, this concludes my prepared testimony. I will be happy to respond to any questions that you or the Subcommittee may have.

STATEMENT OF
REAR ADMIRAL ROBERT B. ABELE, SC, USN
VICE COMMANDER
NAVAL SUPPLY SYSTEMS COMMAND
BEFORE THE
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
OCTOBER 15, 1987

MR. CHAIRMAN, SENATOR ROTH, MEMBERS OF THE SUBCOMMITTEE, I AM REAR ADMIRAL BOB ABELE, SUPPLY CORPS, U.S. NAVY, VICE COMMANDER OF THE NAVAL SUPPLY SYSTEMS COMMAND, COMMONLY CALLED NAVSUP. WE HAVE DIRECT RESPONSIBILITY FOR THE OPERATION OF A VARIETY OF SUPPLY ACTIVITIES THROUGHOUT THE NAVY, AND ARE ALSO RESPONSIBLE FOR THE DEVELOPMENT OF NAVY SUPPLY SYSTEM POLICY.

I AM PLEASED TO BE HERE TODAY TO DISCUSS HOW THE NAVY SUPPLY SYSTEM PROVIDES QUALITY SPARE PARTS AND MATERIALS, AND WHAT WE DO TO REMOVE DEFECTIVE ITEMS WHEN THEY ARE DISCOVERED IN OUR INVENTORIES. I WILL ALSO PROVIDE BACKGROUND INFORMATION CONCERNING OUR HANDLING OF QUALITY ISSUES REGARDING THE ALCHEMY FIRE NOZZLE MATTER DISCUSSED IN MR. VANDER SCHAAF'S TESTIMONY.

LET ME STATE UP FRONT -- NAVY IS VERY CONCERNED ABOUT QUALITY. WE HAVE BEEN AGGRESSIVELY PURSUING PROGRAMS TO EXPAND OUR VENDOR SURVEILLANCE EFFORTS AND SPEED UP OUR REACTIONS TO REPORTED INSTANCES OF DEFECTIVE MATERIAL RECEIPTS. AT MY COMMAND WE ESTABLISHED A DEDICATED QUALITY ASSURANCE GROUP IN 1986 TO DEVELOP PROACTIVE PROGRAMS TO IMPROVE THE QUALITY OF SPARE PARTS. OUR FIELD ACTIVITIES HAVE ALSO EXPANDED THEIR QUALITY STAFFS TO IMPLEMENT THE NEW PROGRAMS. AN EXECUTIVE COMMITTEE HAS BEEN FORMED TO COORDINATE THE QUALITY ASSURANCE EFFORTS OF THE NAVY'S VARIOUS ACQUISITION AND SUPPLY COMMANDS. THIS EXECUTIVE COMMITTEE IS IN TURN OVERSEEN BY A JOINT HEADQUARTERS FLAG LEVEL STEERING GROUP, OF WHICH I AM A MEMBER. BOTH OF THESE COMMITTEES INCLUDE REPRESENTATIVES FROM THE DEFENSE LOGISTICS AGENCY.

FIRST, LET ME NOTE SOME STATISTICS WHICH WILL SHOW THE VOLUME OF SUPPLIES WE ARE PROVIDING TO THE FLEET. OUR FIELD CONTRACTING SYSTEM COMPRISES OVER 900 SHORE ACTIVITIES WHICH HANDLE APPROXIMATELY 2.7 MILLION TRANSACTIONS A YEAR WORTH AN ESTIMATED 12 BILLION DOLLARS. WE MANAGE A SPARE PARTS INVENTORY VALUED AT OVER 39 BILLION DOLLARS WHICH CONTAINS MORE THAN 2.4 MILLION ITEMS. WE PROCESS GREATER THAN 14.5 MILLION INDIVIDUAL MATERIAL RECEIPTS AND ISSUES ANNUALLY. SUPPLY SUPPORT IN THE NAVY IS BIG BUSINESS.

LIKE MANY LARGE AND MULTI-FACETED ORGANIZATIONS, THE NAVAL SUPPLY SYSTEMS COMMAND HAS A STRATEGIC PLAN WHICH SETS FORTH OUR CORPORATE LONG RANGE DIRECTION AND INTEGRATES COLLECTIVE EFFORT IN TEN AREAS ESSENTIAL TO THE FULFILLMENT OF OUR LOGISTICS SUPPORT MISSION. THESE ARE:

- o WEAPONS SYSTEM OPERATIONAL AVAILABILITY
- o SUPPLY RESPONSE TIME
- o QUALITY AND COST OF MATERIAL
- o INDUSTRIAL SUPPORT
- o RESOURCE MANAGEMENT

- o SYSTEM MODERNIZATION, INTEGRATION AND DATA INTEGRITY
AND SECURITY
- o INVENTORY ACCURACY, MATERIAL ACCOUNTABILITY AND CONTROL
- o PRODUCTIVITY AND PROCEDURAL DISCIPLINE
- o QUALITY OF PERSONNEL
- o NAVY QUALITY OF LIFE
- o FACILITIES

WHILE THE SCOPE OF NAVSUP'S RESPONSIBILITIES COVERS A WIDE RANGE OF FUNCTIONAL AREAS, I WILL LIMIT MY REMAINING REMARKS TO SPARE PARTS QUALITY ASSURANCE.

THERE ARE FOUR FUNDAMENTAL ELEMENTS WHICH PROVIDE FOR QUALITY IN SPARE PARTS PROCUREMENT. THE FIRST ELEMENT IS A CLEAR, SPECIFIC AND ENFORCEABLE SPECIFICATION IN OUR CONTRACTS. THE SECOND IS THE AWARD OF THE CONTRACT OR PURCHASE ORDER TO A CAPABLE VENDOR. THE THIRD IS A COMPLIANCE SYSTEM THAT ASSURES VENDOR ADHERENCE TO CONTRACTUAL REQUIREMENTS. THE FOURTH IS AN EFFECTIVE FEEDBACK SYSTEM TO IDENTIFY AND CORRECT PROBLEMS THAT DO ARISE.

WITH REGARD TO THE FIRST ELEMENT, CLEAR, SPECIFIC AND ENFORCEABLE SPECIFICATIONS, THE NAVY IS RESPONSIBLE FOR THEIR DEVELOPMENT, REGARDLESS OF WHICH AGENCY SUBSEQUENTLY PROCURES THE ITEM. IN THAT REGARD CLOSE TO 80 PERCENT OF THE PARTS THE NAVY USES ARE PURCHASED AND CENTRALLY MANAGED BY THE DEFENSE LOGISTICS AGENCY (DLA). NAVY'S SPECIFICATIONS ARE DEVELOPED FOR THE BASIC SYSTEM AND ITS SPARE PARTS AT THE TIME OF SYSTEM ACQUISITION, AND ARE REFINED AS APPROPRIATE THEREAFTER. WE HAVE IMPLEMENTED SEVERAL NAVYWIDE PROGRAMS, KNOWN AS STREAMLINING AND SPECIFICATION EVALUATION AND REDUCTION, TO ENSURE THAT THE SPECIFICATIONS WE USE ACCURATELY DESCRIBE THE PRODUCT WE WANT. THESE SPECIFICATIONS DESCRIBE NOT JUST THE FORM, FIT AND FUNCTION OF THE ITEM, BUT THE QUALITY OF THE ITEM AS WELL.

THE TECHNICAL SPECIFICATIONS AS WELL AS THE QUALITY PROGRAM REQUIREMENTS FOUND IN MILITARY SPECIFICATIONS ARE IMPOSED IN EACH GOVERNMENT CONTRACT FOR SPARE PARTS. THE QUALITY PROGRAM REQUIREMENTS DELINEATE, IN VARYING DEGREES OF STRINGENCY, THE ACCEPTANCE REQUIREMENT FOR THE ITEM. THE STRINGENCY OF ACCEPTANCE REQUIREMENTS IS DIRECTLY RELATED TO THE CRITICALITY OF THE ITEM. FOR EXAMPLE, FOR NUCLEAR REACTOR MATERIAL, SUBMARINE SAFETY AND CRITICAL HAZARDOUS SYSTEM ITEMS, THE NAVY HAS DEVELOPED COMPREHENSIVE PROGRAMS WHICH INCLUDE UP FRONT VENDOR SURVEY AND QUALIFICATION PROGRAMS, EXTENSIVE TECHNICAL AND QUALITY ASSURANCE SPECIFICATIONS, AN INTENSIVE QUALITY

SURVEILLANCE PROGRAM, AND BOTH SOURCE AND RECEIPT INSPECTION. THESE EFFORTS HAVE BEEN EXTREMELY EFFECTIVE IN ENSURING TOP QUALITY MATERIAL FOR THESE PROGRAMS. THEY ARE, HOWEVER, EXPENSIVE AND VERY LABOR INTENSIVE AND ARE THUS APPLIED ONLY TO A SMALL UNIVERSE OF EXTREMELY CRITICAL COMPONENTS. CONTROLLED INDUSTRIAL MATERIAL IS ANOTHER CATEGORY OF MATERIAL FOR WHICH ADDITIONAL QUALITY SPECIFICATION REQUIREMENTS HAVE BEEN ADDED, SUCH AS MATERIAL MARKINGS, CERTIFICATES OF QUALITY CONFORMANCE AND SOURCE INSPECTION. THIS TYPE OF MATERIAL IS BASICALLY BAR STOCK, WELDING RODS, AND PLATING HAVING CRITICAL SHIPBOARD APPLICATION.

AWARD TO A CAPABLE VENDOR IS THE SECOND ELEMENT OF OUR QUALITY PROGRAM. GOOD QUALITY MUST START IN THE PROCUREMENT PROCESS; IT CANNOT BE INSPECTED INTO THE PRODUCT AFTER THE FACT. OUR CONTRACTING OFFICERS CURRENTLY USE SEVERAL METHODS TO ENFORCE THIS, SUCH AS PRE-AWARD SURVEYS OF QUESTIONABLE CONTRACTORS, DETERMINING POOR QUALITY CONTRACTORS' NOT ELIGIBLE FOR AWARD, STRINGENT FIRST ARTICLE TESTING, PRODUCTION LOT TESTING, AND THE USE OF QUALIFIED PARTS LISTS, WHICH RESULT IN AWARD ONLY TO CONTRACTORS PREVIOUSLY PROVEN CAPABLE OF PRODUCING THE REQUIRED PART.

THE NAVY, IN RECOGNITION OF A GROWING CONCERN FOR QUALITY, HAS OVER THE PAST SEVERAL YEARS, INITIATED AND/OR EXPANDED

PROGRAMS TO TRACK VENDOR QUALITY PERFORMANCE. ONE MAJOR EFFORT IS THE VENDOR DATA ANALYSIS REPORT (VDAR), WHICH TRACKS ACTUAL DEFICIENCY REPORTS SUBMITTED BY NAVY USERS. VDAR IS USED TO ALERT PROCUREMENT OFFICERS TO QUESTIONABLE PERFORMERS. DLA ALSO PROVIDES NAVY WITH THEIR CONTRACTOR PERFORMANCE ALERT ADVISORY LISTS FOR USE IN PROCUREMENT DECISION MAKING. A RECENT NAVY PROGRAM INITIATIVE IS THE PRODUCT DEFICIENCY REPORTING AND EVALUATION PROGRAM (PDREP). THE GOAL OF PDREP IS TO CONSOLIDATE AND SHARE ALL AVAILABLE CONTRACTOR PERFORMANCE INFORMATION, IN AN AUTOMATED MODE, WITHIN NAVY. THIS YEAR NAVSUP HAS UNDERTAKEN AN EFFORT TO SURVEY ARMY, AIR FORCE, DLA AND COMMERCIAL VENDOR QUALITY PERFORMANCE DATA BASES FOR POSSIBLE INCORPORATION INTO THE PDREP SYSTEM.

LET ME NOW DISCUSS THE THIRD ELEMENT OF OUR PROGRAM, COMPLIANCE. COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT IS ACCOMPLISHED BY INSPECTIONS PERFORMED BY THE RESPONSIBLE CONTRACT ADMINISTRATION OFFICE. INSPECTION REQUIREMENTS VARY BASED ON THE CRITICALITY OF THE ITEMS. THE INSPECTIONS RANGE FROM REVIEW AND APPROVAL OF THE CONTRACTOR'S QUALITY SYSTEM AND PROCEDURES, TO THE ACTUAL HANDS ON TEST AND INSPECTION OF THE ITEM ITSELF. TESTING OF THE ITEM CAN RANGE FROM A SIMPLE CHECK FOR CORRECT ITEM AND QUANTITY TO A COMPLEX DESTRUCTIVE TEST OF A PRODUCTION LOT SAMPLE IN A TESTING LABORATORY. WHEN ITEM INSPECTION IS PERFORMED, IT IS DONE BY A GOVERNMENT REPRESENTATIVE, EITHER AT

THE VENDOR'S FACILITY OR AT A GOVERNMENT FACILITY. INSPECTION OF THE VENDOR'S QUALITY SYSTEM IS PERFORMED AT EACH FACILITY WHERE THE PRODUCT IS MANUFACTURED. FOR THE OVERWHELMING MAJORITY OF OUR CONTRACTS WE RELY ON THE VENDOR'S COMPLIANCE WITH THE MILITARY STANDARD IMPOSED IN HIS CONTRACT. IN THAT REGARD, THE NAVY BUYS QUALITY INSPECTION TO THE LEVEL REQUIRED IN ACCORDANCE WITH THE FEDERAL ACQUISITION REGULATIONS.

THIS SYSTEM HAS BEEN SUCCESSFUL AND COST EFFECTIVE. LESS THAN 0.6 PERCENT OF THE NAVY SPARE PARTS HAVE QUALITY PROBLEMS. THIS IS AN EXTREMELY CONSERVATIVE ESTIMATE, BASED ON THE NUMBER OF QUALITY DEFICIENCY REPORTS (QDRS) SUBMITTED FROM OUR CUSTOMERS. THE NUMBER OF QDRS THAT ACTUALLY RESULT IN VALIDATED DEFICIENCIES ARE CONSIDERABLY LESS THAN THAT NUMBER.

MOVING TO THE LAST OF OUR FOUR FUNDAMENTAL QUALITY PROGRAM ELEMENTS, LET ME EXPLAIN OUR QUALITY DEFICIENCY REPORTING OR QDR SYSTEM IN SOME DETAIL, SINCE IT IS THE CORNERSTONE OF OUR PRODUCT FEEDBACK SYSTEM. WHEN OUR PERSONNEL DISCOVER A DEFECTIVE ITEM, THEY COMPLETE A STANDARD QDR FORM AND FORWARD IT TO A DESIGNATED NAVY SCREENING POINT. FOR MOST SUPPLY SYSTEM MATERIAL THIS IS THE FLEET MATERIAL SUPPORT OFFICE (FMSO). IN TURN, FMSO CENTRALLY DIRECTS THE QDR REPORT TO THE APPROPRIATE ACTION POINT, WITHIN OR EXTERNAL TO NAVY, FOR INVESTIGATION AND CORRECTION. THIS ACTION POINT COULD BE A NAVY INVENTORY CONTROL POINT FOR

NAVY MANAGED ITEMS, A DLA SUPPLY CENTER FOR THEIR ITEMS, OR ANOTHER SERVICE IF THEY ARE THE SINGLE SERVICE PROCURING AGENCY FOR THE ITEM IN QUESTION. WHEN THE INVESTIGATION IS COMPLETE, THE RESULTS ARE REPORTED BACK TO FMSO. DURING THE QDR INVESTIGATION, EFFORTS ARE TAKEN TO REVIEW PROCUREMENT DOCUMENTATION, IDENTIFY THE ACTUAL MANUFACTURER, AND ISOLATE THE CAUSE OF THE DEFECT THROUGH TEST AND ANALYSIS, SO THAT CORRECTIVE ACTION WILL BE TAKEN AS APPROPRIATE FOR ALL FUTURE PROCUREMENTS, INCLUDING ITEMS STILL IN PRODUCTION.

BASED ON THE RESULTS OF THE QDR INVESTIGATION, FMSO HAS TWO ACTIONS TO TAKE. FIRST IS A RESPONSE TO THE ORIGINATOR OF THE QDR PROVIDING THE RESULTS OF THE INVESTIGATION. IF THE CUSTOMER'S COMPLAINT WAS VALIDATED, FMSO'S RESPONSE WILL INCLUDE DISPOSITION INSTRUCTIONS FOR THE DEFECTIVE ITEM. SECOND, FMSO ISSUES DEFECTIVE MATERIAL SUMMARIES TO ALL NAVY STOCKING POINTS AND USER ACTIVITIES, WITH INSTRUCTIONS TO SCREEN NAVY'S STOCK AND FREEZE OR SEGREGATE THE ITEMS, SHIP SAMPLES TO A DESIGNATED TEST SITE, OR DISPOSE OF THE DEFECTIVE MATERIAL, AS CIRCUMSTANCES DICTATE. DLA TAKES SIMILAR ACTIONS FOR THEIR STOCK. IN THOSE CASES WHERE AN IMMEDIATE JUDGEMENT CANNOT BE MADE AND THE ITEM IS OF A CRITICAL NATURE, ACTION IS TAKEN TO TEMPORARILY FREEZE STOCK PENDING COMPLETION OF CAUSATIVE RESEARCH. INDIVIDUAL FIELD ACTIVITIES ARE RESPONSIBLE FOR ACTING ON THE INFORMATION PROVIDED IN THE BULLETINS.

TO REITERATE, USING THE RESULTS OF CAUSATIVE RESEARCH, WE INITIATE ACTION TO PREVENT RECURRENCE. THIS MAY REQUIRE A CHANGE TO THE SPECIFICATION OR INSPECTION PROCEDURE. IT MAY ALSO REQUIRE ISSUANCE OF A QUALITY LETTER OF INSTRUCTION TO THE GOVERNMENT INSPECTOR WHICH PROVIDES DETAILED INSPECTION INSTRUCTIONS FOR THE PRODUCT ITSELF. IF FRAUD IS SUSPECTED, THE INFORMATION IS TURNED OVER TO THE APPROPRIATE GOVERNMENT INVESTIGATIVE SERVICE. FINALLY, WE MAY TAKE ACTION, INCLUDING DEBARMENT, AGAINST THE CONTRACTOR.

AS YOU CAN SEE WE HAVE GONE FULL CIRCLE. THE INITIAL PROCUREMENT IS STILL THE BEST PLACE TO ENSURE THE QUALITY OF OUR SPARE PARTS. WE MUST INSURE PROPER SPECIFICATIONS, AWARD TO RESPONSIBLE CONTRACTORS, ENFORCE THE REQUIREMENTS OF THE CONTRACT AND CAPTURE DATA FROM FLEET EXPERIENCE.

BEFORE DISCUSSING THE DETAILS OF THE ALCHEMY FIRE HOSE NOZZLE CASE, I WANT TO FIRST PROVIDE SOME BACKGROUND. THE NOZZLE IS AN ITEM MANAGED BY THE DEFENSE CONSTRUCTION SUPPLY CENTER (DCSC), WHICH IS A DEFENSE LOGISTICS AGENCY ACTIVITY. DCSC BUYS THE NOZZLE USING A STANDARD NAVY DRAWING. THE SAME DRAWING HAD BEEN USED SINCE 1967, AND THERE HAVE BEEN QUALITY PROBLEMS WITH ONLY ONE SUPPLIER, ALCHEMY.

USING THE STANDARD DRAWING, DCSC HAD AWARDED THREE CONTRACTS TO ALCHEMY FOR A TOTAL OF 3490 NOZZLES IN 1981-82. THE NAVY FIRST BECAME AWARE OF A POTENTIAL PROBLEM WITH THE ALCHEMY NOZZLES WHEN A QUALITY DEFICIENCY REPORT (QDR) WAS SUBMITTED TO FMSO BY THE USS FULTON, ONE OF OUR SUBMARINE TENDERS, IN OCTOBER 1982. IN ACCORDANCE WITH EXISTING PROCEDURES, FMSO FORWARDED THE QDR TO DCSC FOR INVESTIGATION AND RESOLUTION. DCSC ADVISED FMSO IN FEBRUARY 1983 OF POTENTIAL QUALITY PROBLEMS WITH THE NOZZLE, AND REQUESTED ACTION TO SCREEN OUR INVENTORIES. WITHIN DAYS FMSO RELEASED A MESSAGE TO ALL NAVY ACTIVITIES, INCLUDING FLEET COMMANDERS, TO SUSPEND ISSUE OR REMOVE FROM SERVICE, SEGREGATE AND HOLD FOR DISPOSITION ALL NOZZLES MARKED WITH SPECIFIC DLA CONTRACT NUMBERS WHICH IDENTIFIED THE SOURCE AS ALCHEMY. IN MARCH 1983, DCSC PROVIDED FMSO DISPOSITION INSTRUCTIONS FOR THE PREVIOUSLY SUSPENDED ALCHEMY MATERIAL. FMSO RELEASED ANOTHER MESSAGE THAT SAME MONTH, ADVISING USERS TO SHIP THE SUSPENDED MATERIAL TO DCSC COLUMBUS AND REQUEST CREDIT FOR THE DEFECTIVE MATERIAL.

THE QDR SYSTEM IN EFFECT AT THAT TIME ASSUMED ALL NAVY COMMANDS RECEIVED THE MESSAGE AND PROMPTLY CARRIED OUT THE INSTRUCTIONS. IN HINDSIGHT, THAT WAS AN ERRONEOUS ASSUMPTION. DUE TO YOUR INITIAL INTEREST IN THIS NOZZLE WE RECENTLY PREPARED A MESSAGE TO ALL NAVY UNITS OF THE POTENTIAL HAZARD AND DIRECTED THAT ALL ALCHEMY NOZZLES, EITHER STILL IN USE OR IN INVENTORY, BE

REMOVED FROM USE, SEGREGATED AND REPORTED TO US. IN THE INTERIM, ONE SUCH NOZZLE WAS FOUND ABOARD ONE OF OUR SHIPS DURING YOUR STAFF'S VISIT TO NORFOLK ON 22 SEPTEMBER 1987. WE ARE STILL ACCUMULATING OUR NAVY-WIDE DATA, HOWEVER RESULTS TO DATE INDICATE THAT OUR ORIGINAL NOTIFICATION IN 1983 TO TURN IN THE NOZZLES WAS NOT FULLY COMPLIED WITH. WE WILL PROVIDE YOUR STAFF WITH THE FINAL COUNT OF DEFECTIVE NOZZLES THAT WE HAVE LOCATED WITHIN THE NEXT TWO WEEKS.

TO ENSURE FUTURE COMPLIANCE WITH FMSO DIRECTIVES TO STOCK POINTS AND CUSTOMER ACTIVITIES ON CRITICAL ITEMS, A CLOSED-LOOP TRACKING SYSTEM IS BEING DEVELOPED FOR CATEGORY I ITEMS. CATEGORY I ITEMS ARE DEFINED AS THOSE THAT MAY CAUSE DEATH, INJURY OR SEVERE OCCUPATIONAL ILLNESS, WOULD CAUSE LOSS OF MAJOR DAMAGE TO WEAPONS SYSTEMS, WOULD DIRECTLY RESTRICT THE COMBAT READINESS CAPABILITIES OF THE USING ORGANIZATION, OR WOULD RESULT IN A PRODUCTION LINE STOPPAGE. USS FULTON'S 1982 QDR SUBMITTED FOR THE ALCHEMY NOZZLE WAS A CATEGORY I. IN ADDITION TO SYSTEM-WIDE MESSAGES ADVISING OF THESE POTENTIAL DEFECTIVE ITEMS, WE WILL TRACK DELIVERIES ON CONTRACTS TO SUPPLY CENTERS AND THEN, USING REQUISITION HISTORY FILES, DETERMINE THOSE CUSTOMERS WHO HAVE BEEN ISSUED THAT SPECIFIC STOCK NUMBER. UNLESS THESE CUSTOMERS ANSWERED THE FIRST MESSAGE, A SECOND, MORE SPECIFIC MESSAGE WILL BE SENT TO THOSE IDENTIFIED COMMANDS WITH A MANDATORY RESPONSE REQUIREMENT. WE WILL ALSO REVIEW OUR CURRENT

FILES OF OPEN QDRS FOR CATEGORY I HEALTH AND SAFETY ITEMS AND USE THIS SYSTEM TO FORCE CLOSURE ON EXISTING CASES.

WE ARE IN THE PROCESS OF OTHER IMPROVEMENTS IN THIS AREA. WE HAVE REVIEWED THE STAFFING OF THE QDR UNIT AT FMSC. WE PROVIDED ADDITIONAL STAFFING DURING LAST FISCAL YEAR AND ARE PROVIDING ADDITIONAL STAFFING THIS YEAR FROM WITHIN CURRENT BUDGET ALLOCATION.

CURRENTLY THE CONTROL OF OUTSTANDING QDRS IS DONE MANUALLY. THESE FILES WILL BE CONVERTED TO A DATA BASE MANAGEMENT SYSTEM IN THE FUTURE, AND THIS WILL PROVIDE SIGNIFICANT IMPROVEMENTS TO THE MANAGEMENT OF THE ENTIRE PROCESS, AS WELL AS TIMELIER REPORTS FOR NAVY HEADQUARTERS. THE DATA BASE WILL ALSO ALLOW THE COMPILATION OF AN ANNUAL LIST OF OPEN QDRS THAT CAN BE DISTRIBUTED TO CUSTOMER ACTIVITIES AND FLEET INSPECTION TEAMS.

TO FURTHER EMPHASIZE THE DEFECTIVE MATERIAL PROGRAM AND PUBLICIZE THE CONSEQUENCES OF NOT COMPLYING WITH QDR NOTIFICATIONS, THE COMMANDER, NAVAL SUPPLY SYSTEMS COMMAND HAS PERSONALLY WRITTEN TO ALL FLEET AND TYPE COMMANDERS DESCRIBING THE FLEETS' LACK OF COMPLIANCE IN THE CASE OF THE FIRE HOSE NOZZLES, AND REQUESTING RENEWED EMPHASIS ON QDR PROCESSING. WE HAVE PREPARED ARTICLES FOR VARIOUS NAVY PUBLICATIONS WHICH EXPLAIN THE PROGRAM AND DESCRIBE THE IMPACT THAT LACK OF ACTION

ON A QDR NOTIFICATION CAN HAVE ON A SHIP OR AN INDIVIDUAL. THESE TYPES OF ACTIONS WILL BE REPEATED ON A ROUTINE BASIS.

IN SUMMARY, THE NAVY ORDERS MILLIONS OF ITEMS FROM OTHER GOVERNMENT AGENCIES EACH YEAR AND PROCURES BILLIONS OF DOLLARS WORTH OF MATERIAL FOR NAVY USE. EVERY INDICATION WE HAVE IS THAT THE VAST MAJORITY OF THE VENDORS DELIVER A QUALITY PRODUCT THAT MEETS GOVERNMENT SPECIFICATIONS OR STANDARDS. FOR THE FEW CONTRACTORS DELIVERING SUB-STANDARD PRODUCTS, THE NAVY HAS A SYSTEM OF REPORTING AND REMOVING THESE ITEMS FROM STOCKS AND USER COMMANDS. THIS SYSTEM HAS PROVEN TO BE EFFECTIVE OVER THE YEARS. WHERE DEFICIENCIES HAVE BEEN IDENTIFIED, CORRECTIVE ACTIONS ARE BEING TAKEN. YOUR STAFF'S REVIEW OF THE ALCHEMY SITUATION HAS BEEN A VALUABLE CONTRIBUTION TO OUR EFFORTS TO ENHANCE PRODUCT QUALITY.

THE NAVY MUST INSURE THAT IT RECEIVES QUALITY PRODUCTS WHEN IT GOES TO THE MARKETPLACE, BUT THE REQUIREMENT FOR QUALITY IN HEALTH AND SAFETY ITEMS IS PARTICULARLY CRITICAL TO PROTECTING THE YOUNG MEN AND WOMEN IN THE FLEET TODAY. WE OWE THEM SAFE, DEPENDABLE MATERIAL, AND OUR GOAL IS TO PROVIDE EXACTLY THAT.

MR. CHAIRMAN, THIS CONCLUDES MY TESTIMONY. I WOULD BE GLAD TO ANSWER ANY QUESTIONS FROM YOU OR THE COMMITTEE.

Prepared Statement of Alexander Savicki

My name is Alexander Savicki. I am a retired machine designer and I currently live in Telford, Pennsylvania. I started working in a machine shop at Bethlehem Steel Company as a test machinist 37 years ago and since that time I have worked at and supervised and coordinated engineering design with almost all possible talents in a machine shop. I worked for FMC Corporation (formerly Link-Belt Company) for 20 years and then did contract engineering work for about 10 different organizations, including General Dynamics; Scott Paper Company; Philadelphia Gear Company; Allied Chemical Company; Birdsboro Foundry and Machine Company; Belloit Company; the U.S. Army; and finally, Alchemy, Inc., a small manufacturing company owned and operated by Leo Schweitzer III.

I worked for Alchemy in 1982 and I certainly never expected to end up testifying before a grand jury, or at a criminal trial, and now before a Senate Subcommittee. But I can tell you that working for Mr. Schweitzer was unlike any other job I ever had. Alchemy made me nervous from the start.

working for Mr. Schweitzer was unlike any other job I ever had. Alchemy made me nervous from the start.

Mr. Schweitzer was getting lots of DOD contracts but he just wasn't equipped to handle them. He had some expensive computer-programmed machines but he did not have the skilled people to run them. Because of this, when deliveries were getting close to being due and products had to be produced, Mr. Schweitzer at one point had office secretaries working in the shop, assembling nozzles.

I was led to believe that I was hired specifically to work on the design of high-quality check valves, which I assumed were general-use valves and which can be used in a variety of applications. Instead, I spent just as much time working on the 2 1/2 inch fire hose fog nozzles which were destined for Navy ships. The nozzles I saw were simply not useable. I worked with drawings supplied to Mr. Schweitzer by DOD, and while they were hard to read, contained one obvious error and one detail that was difficult to analyze, they were generally okay. The real reason the nozzles weren't good was that, at Mr. Schweitzer's direction, the employees took shortcuts and used patchwork solutions even when I and others told him that things were not working out. He said he needed a paycheck to continue in business, so he had to produce something.

When I first arrived at Alchemy, the main activity in the shop was the production of these 2 1/2 inch nozzles. And as I mentioned, although I had not been hired primarily to work on them bit by bit, I became involved in trying to solve problems with these leaky nozzles. For example, at one point in desperation, Mr. Schweitzer wanted to leave the seat clamp ring out of the nozzle because it would not fit, due to the poor machine workmanship. I told Mr. Schweitzer not to leave the ring out, because the Quality Assurance Representative (Mr. Brown) would notice this and reject them. Mr. Schweitzer told me that I shouldn't worry and he would talk to Mr. Brown. He told me that we wouldn't actually ship these valves, but we would present them to the QAR so he could see that they pass the performance test and could be turned on and off. Mr. Schweitzer said we would later manufacture another batch properly and present them to the QAR for inspection. I really don't know if the original nozzles were actually delivered.

The most critical problem with the nozzles was that the plastic balls inside the nozzles were not made of the required material and were too fragile. This would present a potentially disastrous situation on board a ship because the nozzle could possibly lock in one position when the ball broke. If it is in the closed position and there is a fire, it won't spray water. If it is already in the open position, you wouldn't be able to turn it off.

Another employee and I tested the balls -- we threw them on the floor, and they shattered. That was a bad sign, because I knew that the turbulent flow pressure inside a nozzle would be great and the ball could break. That employee told me in earshot of Mr. Schweitzer that they shattered when thrown on the floor. Mr. Schweitzer obviously heard this report, because he glared at us. I believe he did ship them out, or I wouldn't be here today.

The balls were supposed to be made out of a more expensive and durable material, possibly injection-molded. Injection equipment is expensive, so Mr. Schweitzer used a less-expensive plastic made with a less-expensive, pour-casting, leaving a weaker, more fragile ball.

Putting aside the basic problem of the type of plastic used by Mr. Schweitzer, the balls needed to be lubricated to cut down the friction so they would easily and smoothly move into different positions. I suggested that a special high pressure, water resistant grease be used. But Mr. Schweitzer found his own grease, which was high pressure but not water resistant and cost a lot less. The result was that the grease would be washed away, and to be effective, would need to be re-applied each time the nozzle is used. The problem was that no one was telling the Department of Defense this, so the grease was not being reapplied. Without applying more grease, the balls would probably break due to the friction.

There were other problems with the nozzles besides the plastic balls. There was a provision in the nozzle specifications calling for a drop of molten solder to hold a screw in place (so it could not come loose or be tampered with). But Mr. Schweitzer felt that liquid solder was an acceptable substitute under the contract; and even though I warned him not to, he used liquid solder instead. This is a joke, since liquid solder is nothing more than glue with a silver color. I had never seen anything like this in any of the other machine shops I had worked in.

The nozzles were not supposed to have any water leakage at all. But the nozzles manufactured at Alchemy were so substandard that inevitably there were leakage problems. One day, I overheard Leo discussing the leakage problem with another employee. I jokingly suggested to Mr. Schweitzer that he use some automobile radiator sealant to fix the leaks. He became wide-eyed and asked it if would really work. I said I didn't know, because I knew this was a bad idea. To my surprise, Mr. Schweitzer sent me out to buy some radiator sealant to try it on the nozzles. I bought the sealant, but in my opinion, it had no effect on the type of leakage that I found. I informed Leo that the leakage came from bad machinery and assembly problems.

There was also a situation where the screw holding the nozzle handle leaked because of poor tolerances. I suggested using thread sealer to Schweitzer, and the QAR approved. After

the QAR left, Mr. Schweitzer told me he was not going to use that. Instead, he took me to an Ames department store and bought a caulk gun and caulk (which is usually used on storm windows). He tried to use this on the nozzle. This didn't work because the caulk oozed out of the screw threads due to water pressure. It was hard to believe that these nozzles were being made to put out fires on ships. Caulk may stop leaks in a storm window during a thunder storm, but it wouldn't stop 100 pounds per square inch of water pressure from a firehose.

Regarding the check valves to be used in F4 jet fighter ejection seats, I was not aware of their end use when I first went to Alchemy. Later I learned that under the contract with DOD, Alchemy was supposed to be buying these check valves from Circle Seal, an approved vendor in California. But in fact, Mr. Schweitzer was trying to manufacture them himself. At one point, the QAR, Jim Brown, asked me if the check valves were coming from Circle Seal. At the time, I didn't know that that's where they were supposed to come from, so I told Mr. Schweitzer. He told me that he would speak to Mr. Brown about it and take care of it.

That's not all I didn't know about the check valves. Mr. Schweitzer gave me specifications for the check valves which were dated 1954 and said CANCELLED on them. I asked Mr. Schweitzer for more up-to-date specs but never got anything. Using these 1954 specs, and the sketch provided by Mr. Schweitzer, I put together a drawing of a prototype of the check valves for

Alchemy's machinists to use. It's not surprising that Leo later told me that the Air Force rejected the valves; they were the wrong size and had other problems.

Prior to manufacturing the prototype, the check valve was sent to an outside testing company. The valve failed the test, because the tolerances were off and the valve was wearing off-center. I then tried to re-design the check valves so they would pass the tests and be deliverable.

Alchemy did not have its own testing equipment, which it should have had. Mr. Schweitzer was only interested in taking the minimal quality assurance steps. For the check valves, Alchemy was supposed to send one to DOD for qualification before manufacturing, but Mr. Schweitzer would not do this, and this particular refusal led to my departure from Alchemy. I don't know what eventually happened to the valves.

Looking back, there may have been more things I could have done to correct a serious situation. At the time, Leo Schweitzer was my boss; that made it hard for me. I did what I could until it got so bad that I had to leave.

During my time with Alchemy, Leo Schweitzer told me many times that he was going to be a millionaire. People like Leo know that DOD has a big pile of money to spend and the system is too complicated to adequately keep track of what is going on, so

they get into the business only to make money without experience or expertise resulting in products of inferior quality.

I would be glad to answer any questions you might have for me.

PREPARED STATEMENT OF DAVID C. RUPP

My name is David Rupp. I am currently employed as an engineer in the Propulsion and Environmental Controls Department at McDonnell-Douglas in Long Beach, California, where I work on the DC-9, Series 80 aircraft. I graduated from Cal. Poly. Pomona in 1983 with a Bachelor of Science degree in agricultural engineering.

I started working at The Spring Works on May 25, 1984 as the company's Sales Manager and I remained with the company for about one year. The Spring Works was basically a machine shop equipped primarily to manufacture specialty springs. It was a small company, with only about 10-12 employees.

Bill McCullough owned 51 percent of The Spring Works and was the president and driving force behind the company's operation. He made all the key decisions. Stuart Baron owned 49 percent of the company and, as the technical expert, was the Shop Manager. He concentrated primarily on the manufacturing side of the business. Mr. McCullough knew only a limited amount about the technical side of the spring industry and preferred to focus on the business side of the company's operations.

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Most of The Spring Works' orders were small, usually only 100-500 pieces. But the items the company manufactured were unique in that they always involved a special design or specification which could not be obtained through ready-made sources.

The Spring Works also had facilities to perform a limited number of additional processes on these springs. However, the company was not an authorized source for these additional processes for all of its aerospace customers. An authorized source is a vendor which has been approved by a prime contractor or a subcontractor to perform a certain type of procedure or supply a certain type of item. The approval is usually conditioned upon an inspection of the vendor's facilities and a review of the vendor's operating procedures.

For example, for certain customers, The Spring Works was an approved source for certain kinds of heat treatments and for passivation. Passivation is a cleaning process which removes oils and contaminants from different kinds of stainless steel. The Spring Works was not equipped to perform other processes, such as various kinds of plating. For all those processes which the company was not approved to perform, it was required to send the manufactured items out to an approved source, have the processing done and get the items back, along with a certification that the processing had been performed to the blueprint's requirements.

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After about six months on the job, Mr. McCullough promoted me to an administrative position in which I could utilize my engineering background. In this position, I was responsible for reviewing blueprints and verifying design specifications, quality assurance, outside processing and outside procurement. My broad range of responsibilities gave me a good overview of the operation of The Spring Works operation and it was in this position that I became aware that the company was supplying substandard products to its aerospace customers. During my time there, approximately 60 percent of The Spring Works' orders involved government contracts, with the majority involving the Department of Defense and aerospace contracts, and roughly 80 percent of those military contracts involved some form of product substitution.

There were several different ways in which these product substitutions would occur. However, the one thing they all had in common was the falsification of certifications by The Spring Works. There are two different types of certifications involved: material certifications, which identify the nature of the raw material used to manufacture a particular order; and process certifications, which are used to ensure that the necessary processes have been performed on the manufactured items. I found that Mr. McCullough had been utilizing false certifications since the inception of The Spring Works. In fact, he amassed a library of blank certifications from various vendors by whitening out the

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information on completed certifications and running them through the copying machine. He told me that he purposely kept a copying machine which reproduced poor quality copies so that he could explain the lack of clarity on the certifications he submitted.

Once an order came into the office at The Spring Works, a job traveller was printed out on the computer. This form would outline how a job was to be done, including what material was to be used and what types of processing were to be performed. It was on the job traveller that Mr. McCullough would write, in red pencil, the shortcuts which were to be taken on a particular job. Among his usual instructions were:

"M/C"--This meant a material change, usually involving the substitution of a cheaper type of stainless steel;

"Dupe"--This meant pull a whited-out certification from the file and falsify it accordingly; and

"Dummy"--This meant one of two things; either send a small number of items from the order out to be processed legitimately and then falsify the certification from those few items so that it covered the whole order; or it could have meant send out certain parts which were not part of the order to be legitimately processed at a lower cost (for example, small springs when the order is for large springs) and then falsify the certification to make it match the items ordered.

Mr. McCullough ordered that these shortcuts be taken in order to save money and to save time so that more orders could be

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filled. For example, he would rather get 10 pieces of an order processed for \$25 and falsify the certification than spend \$85 to get the whole order of 100 pieces processed properly. When I started working in the office at The Spring Works, I was determined to do things properly. So I started using correct raw materials and approved processing sources. I took great effort to locate authorized sources which would give The Spring Works a good price while still doing quality work. Ironically, the cost of using many of these approved sources was about equal to the cost of the illegal methods used by Mr. McCullough. However, Mr. McCullough still demanded that things be done his way. I had seen him routinely fire employees who did not do what he wanted, even when what he wanted them to do was wrong. Given that the job market was so tight and I needed my job, I decided the best thing for me was to do what Mr. McCullough said and, at the same time, start looking for another job. That's exactly what I did but it took me a long time to find a new job.

In the meantime, while I was with The Spring Works, being an engineer and interested in aerospace, I would ask the buyers who placed orders with the company what end use items the products we made would be used in. I was amazed at the broad range of major weapons systems and aircraft which incorporated items made by The Spring Works. The list includes the Space Shuttle, the F-16 fighter, the Pershing missile and the machine guns in the Apache helicopter. Mr. McCullough also knew the types of critical end use items which the products he was making were going into and

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the potential safety problems he was creating but he still insisted on cutting corners.

Mr. McCullough asserted that, so long as the shortcuts he took were not noticeable visibly to his customers, everything was okay. However, that was not the case and he knew it. The shortcuts he took in the manufacturing process could have potentially devastating effects on the components in which these parts were installed by subcontractors. In turn, this could result in untold harm resulting to the end use item and its operators after the prime contractor also unwittingly installed the assembly which included these substandard springs.

It would take too long to describe in detail the potential harm created by The Spring Works' manufacturing malfeasance. Let me just briefly describe the potential dangers created by some of the particular shortcuts which Mr. McCullough authorized.

--The company often substituted a cheaper type of stainless steel, a material which was not as strong and was less resistant to heat and therefore did not perform as well at higher operational temperatures.

--The company failed to heat treat springs or failed to heat treat them properly (which, incidentally, together accounted for probably the largest number of certifications falsified by The Spring Works). Though Mr. McCullough repeatedly told me that these treatments were not essential, all data in materials handbooks indicate that severe problems could result from failure

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to heat treat and substandard heat treatments, including that the springs would become brittle and crack. These dangers are increased when one considers that certain of the special materials which The Spring Works' customers ordered are designed, if properly manufactured and treated, to operate under very high stress levels.

--The company failed to subject the springs to magnetic inspection, so that they may have failed to locate microscopic cracks in the springs which could have led to the springs' failure.

--And finally, the company failed to properly plate the springs with cadmium, which can result in contamination and hydrogen embrittlement, causing the springs to become fragile and break.

The dangers posed by these and other shortcuts which The Spring Works took in the manufacturing of springs would be bad enough if the springs were only used under normal conditions. However, in this case, the springs were going to be utilized primarily in aerospace systems where they would be operated under conditions of high stress at extreme temperatures. The springs were used in hydraulic actuators for braking systems, loading gear, wing flaps and weapons doors. There is little margin for error if these critical systems fail. Nevertheless, that is what The Spring Works was risking for a few extra dollars.

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Mr. McCullough had an uncanny knack for knowing which of his customers tested the items they ordered and how thorough that testing was; he responded accordingly. It seems he was right most of the time or else he would have gotten caught more than he did and he wouldn't have been able to keep this manufacturing scheme going for seven years.

That's not to say he was perfect. He got caught occasionally when a customer found out that the springs they ordered were made from the wrong material or had not been processed properly. But in all the cases that I remember, Mr. McCullough was able to talk himself out of it, usually by claiming it was an inadvertent error and volunteering to correct the problem. Normally, the customer would send the items back to be replaced or repaired and sometimes Mr. McCullough would send back a correct order and sometimes he would send back the same substandard batch but the customer would accept them anyway without retesting them, presuming they were OK. I remember one time when a customer sent a defective order back to be re-machined and the items remained in the shipping carton, unopened, while the customer telephoned repeatedly, telling Mr. McCullough how urgently he needed the springs. Finally, when the customer was desperate for these specially made springs, Mr. McCullough sent them back the same, unopened cartons of springs which had been originally rejected as substandard. They were accepted by the customer without a word.

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Mr. McCullough outsmarted many of his customers. For example, some customers required The Spring Works to submit a sample of the raw material from which an order was manufactured along with a completed order so that the material sample could be tested to make sure it met the required specifications. Often, The Spring Works would submit a correct material sample but the order would actually be manufactured from substandard raw material. However, the customer would only test the material sample and, finding that it was OK, the order would be accepted without further testing.

Generally, most testing which customers of The Spring Works did was in their own facilities upon receipt of an order. Rarely was The Spring Works the subject of a source inspection. By that I mean an inspection where quality assurance inspectors from a customer did an on-site evaluation of The Spring Works' facilities and procedures. Further, we were never inspected by any government quality assurance representatives.

It soon became quite clear to me that this was the way The Spring Works did business. They had operated this way prior to my arrival and nothing I could do was going to change this. I even went so far as to write a Quality Control Manual for the company. But when I gave it to Mr. McCullough, he ignored it. So, after looking for another job for three months, I found my current position and left The Spring Works in May of 1985.

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At first, I kept the problems I witnessed at The Spring Works to myself because I had no idea who I could contact who would be interested in investigating this situation. However, working as an aerospace engineer, I was constantly bothered by the fear that some of those substandard springs could result in a disastrous accident which could have been avoided if someone knew what The Spring Works was doing. I didn't know exactly what to do but I knew I had to do something to make people aware of what was going on at The Spring Works.

I telephoned someone I knew who was a respected manufacturer in the spring industry, as well as someone I knew at one of the government subcontractors which was a customer of The Spring Works and I told both of them what was going on there. The latter individual contacted his company's Quality Control Manager and that person alerted the Defense Contract Administration Service, which started the investigative ball rolling.

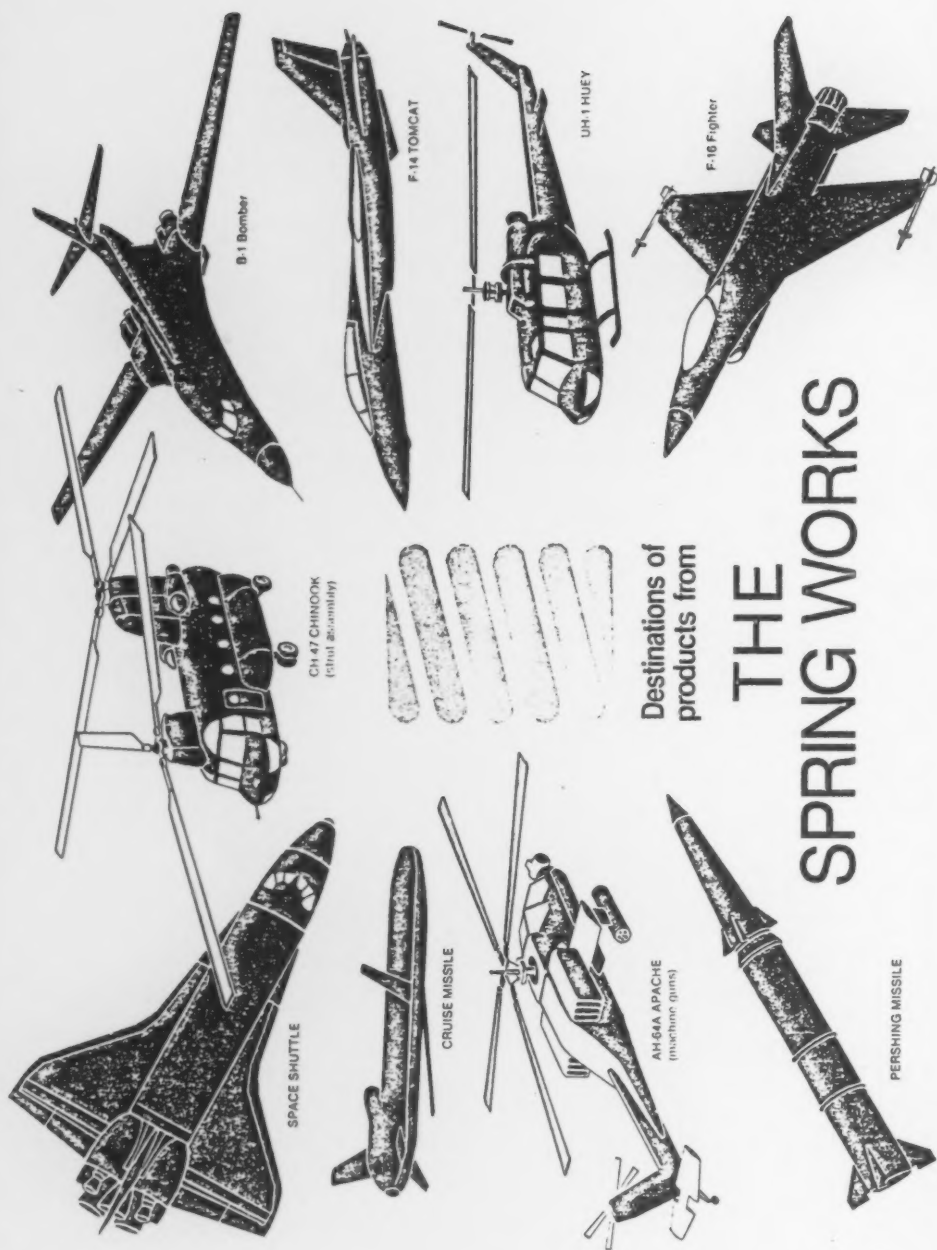
In addition, I drafted letters to government subcontractors which I knew were customers of The Spring Works. In these letters, I explained in detail the type of product substitution fraud which was going on at The Spring Works and I attached copies of certifications which had been falsified as proof of these allegations. I addressed these letters to quality control and procurement personnel at these companies and sent them the letters marked "Personal and Confidential."

Page 11

I don't know how much good those letters did. But I do know that, in one case, my efforts to expose the fraud being conducted by The Spring Works had the opposite effect of what I had intended. Rather than resulting in The Spring Works being investigated, I was contacted twice by a private investigator, who wanted to know what I was saying about The Spring Works.

It turned out that Peter M. Wanbaugh, Manager of Procurement for G&H Technology, Inc., a government subcontractor, customer of The Spring Works, and one of the individuals to whom I had sent a "Personal and Confidential" letter alerting him about the fraud being committed by Bill McCullough, had turned the letter over to Mr. McCullough. I presumed that Mr. McCullough then hired the private investigator to see what I was up to. Needless to say, I refused to speak with the investigator and was quite happy when the Defense Criminal Investigative Service began its investigation of this case.

As an aerospace engineer, I am particularly concerned about the general problem of product substitution. But as a concerned citizen, I am especially alarmed when this problem involves military vehicles and weapons systems. I was prepared to testify at the trial in this case, should it have come to that, and I am pleased that the principals in this matter served time in prison for what they did. I also appreciate the opportunity to testify before this Subcommittee today in an effort to do whatever I can to resolve this potentially critical problem. I would be pleased to answer any questions which you might have for me.



Destinations of
products from

THE SPRING WORKS

NOV 3 1987

MEMORANDUM FOR FEDERAL ACQUISITION REGULATION SECRETARIAT,
GENERAL SERVICES ADMINISTRATION

SUBJECT: Proposed Revision to Federal Acquisition Regulation,
"Debarment and Suspension Procedures," Federal
Acquisition Case No. 87-24

On September 11, 1987, Mr. James H. Curry of this office provided you with comments that concurred in the subject case. In preparing the comments, adequate consideration was not given to the results of criminal investigations involving product substitution or defective material. Many of the product substitution cases involve low dollar procurements of material that significantly impact on safety of life and/or readiness. Many of the cases involve companies serving as suppliers of critical weapon system components under subcontracts of relatively low value. For that reason, I strongly object to the exclusion of subcontracts not exceeding \$25,000 from the policy of debarment/suspension ineligibility (Part 52.209(e)).

I would also like to raise one suspension/debarment related issue which may be appropriately addressed in the proposed revision. We believe a procedure should be established requiring a department or agency that enters into an administrative settlement with a contractor should, in lieu of debarment, notify all other departments and agencies of their action. That could be accomplished through an additional listing in the Consolidated List issued by the General Services Administration. Such notification would sensitize other departments and agencies to avoid action on their part without being apprised that the principally affected department had found good cause not to suspend or debar the contractor despite an indictment or conviction.

I realize that the comment period for this case closed on September 28, 1987. But I urge you to consider the comments because of the potential safety of life and readiness issues involved in permitting debarred or suspended subcontractors providing parts for weapon systems under Defense contracts.

SIGNED

Derek J. Vander Schaaf
Deputy Inspector General

PRODUCT SUBSTITUTION INDICTMENTS
FOR PERIOD JANUARY 1, 1986 to DECEMBER 31, 1987

<u>SUBJECT</u>	<u>NAME</u>	<u>DATE CHARGED</u>
Genii Research, Inc.	Genii Research, Inc.	10/03/86
	Castorini, Luigino	10/03/86
P.S. Precision Screw & Tool Co.	P.S. Precision & Tool Co.	02/12/87
Components Plus, Inc.	Fernandez, Frank	01/27/86
	Goodridge, Arnold	01/27/86
	Frank, Roslyn	01/27/86
A&G Precision Specialties, Inc.	A&G Precision Specialties	11/04/87
	Simonin, Glen	11/04/87
	Kirchner, John	11/04/87
Ostelic Enterprises	Ostelic Enterprises	12/31/86
Tara Company	Dahill, John	12/17/86
Delco Wire & Cable Co.	Delco Wire & Cable Co.	05/07/87
	Jesko, Paul	05/07/87
	Flynn, John	05/07/87
	Flynn, Michael	05/07/87
	Krause, Mark	01/14/87
	Delco Electronics Corp.	05/07/87
	Dahill, John	05/07/87
Berry, Raymond O.	Berry, Raymond	12/10/86
Carol Cable Company, Inc.	Kaplan, John	05/07/87
	Koffler, Lawrence	05/07/87
Tosko, Henry Joseph	Tosko, Henry	09/04/86
Durand Equipment Company	Petruzzi, Carmen	02/16/86
Mentor Electric Supply Corp.	Mentor Electric Supply Corp.	07/21/86
	Maloney, Timothy	07/21/86
Eck Supply Company	White, Jr., Harry	10/15/87
	White, II, Harry	10/15/87
White Packing Company	White Packing Company	10/15/87
	White, II, Harry	10/15/87

Trinity Services, Inc.	Mayfield, David III	01/09/86
	Hunter, Lewis	01/09/86
	Stewart, Jr., George	01/09/86
	Trinity Services, Inc.	01/09/86
	Assured Benefits, Inc.	01/09/86
Polymer Chemicals, Inc.	Polymer Chemicals, Inc.	09/24/87
	Grant, Alan	09/24/87
Diversified American Defense, Inc.	Helms, Jr., Joel	07/31/86
	Ashley, Welton	07/31/86
	Sheppard, Harvey	07/31/86
	Diversified American Defense, Inc.	07/31/86
American Embroidery Co., Inc.	American Embroidery Co., Inc.	09/10/87
	Hathorn, Jr., Arthur	09/10/87
Wellham, James Willie	Wellham, James	04/28/87
Southeast Connector	Southeast Connector	12/17/86
	Bonavia, Edward	12/17/86
	Brand, David	12/17/86
	Klein, Richard	12/17/86
	Kamins, Frederick	12/17/86
	Bonavia, Edward	12/17/86
	Bonavia, Edward	12/17/86
J. L. Platt & Son, Inc.	J.L. Platt & Son, Inc.	08/28/87
	Platt, John	02/26/87
Aeromech Industries, Inc.	Aeromech Industries	12/10/87
	Tecaero Corporation	12/10/87
	Ard, Robert	12/10/87
	Valentine, Heath	12/10/87
Brownwood Wollen Mills, Inc.	Brownwood Woolen Mills, Inc.	04/01/86
	Tait, Robert	04/01/86
Phillips, John S.	Phillips, John	12/14/87
Peck Equipment Company	Peck Equipment Company	04/04/86
Peters Machine Company, et al	Peters, Jerry	12/18/86
Combs, Wanda L.	Centerpiece Machine Shop	02/03/87
	Combs, Wanda	02/03/87
Trimko Machine Products	Trimmer, Donald	10/27/87
Penrod R. Wayne	Penrod, Rene	08/25/86
	Randall, Craig	08/25/86

Hisle, Stephen T.	Hisle, Stephen	11/07/86
Carsonville Metal Products Co. Inc.	Bhandawat, Suresh Bhandawat, Suresh	11/17/86 11/17/86
Control Engineering Co.	Control Engineering Co. Bartlett, Charles	05/12/86 04/17/86
Rausch Manufacturing Co.	Rausch Manufacturing Co., Inc. Rausch, John Rausch, Randall	02/26/86 02/26/86 02/26/86
Roach Cadillac, Inc.	Couts, Robert Morris, Dorothy Junga, Gail Otto, Gail Roach Cadillac, Inc. Coach and Motor Co.	02/26/87 02/26/87 02/26/87 02/26/87 02/26/87 02/26/87
Needham, Inc.	Needham, Inc. Way, Donald Needham, William	03/15/86 09/15/86 09/15/86
Midwest Precision Casting Co.	Moreau, Roger Midwest Precision Casting	02/24/87 02/24/87
Fauconniere Manufacturing Co.	Ham, William Fauconniere Manufacturing Co.	01/14/86 01/14/86
Leavitt Lumber Company	Leavitt, Stanley Leavitt Lumber Company	05/08/86 05/07/86
SGW, Inc.	SGW, Inc. Schuetz, Robert	02/06/86 02/06/86
Spectrum Enterprises	Jubb Sr., James Jubb, Jr., James Piper, Sr., Larry Pendergraft, Lloyd	04/23/87 04/23/87 04/23/87 04/23/87
RGW Enterprises	Bailes, George Hunter, Janice	04/15/87 04/15/87
General Fire Protection	Kling, Mark Kling, Tim Kling, John	08/12/87 08/12/87 08/12/87
Electro Machine and Engineering Co.	Electro Machine and Engineering Turnbow, Randall	06/18/86 06/18/86
Certified Testing Corp	Robles, Magdaleno	10/21/87

Spring Works, Inc., The	The Spring Works, Inc.	12/11/86
	McCullough, William	12/11/86
	Baron, Stuart	12/11/86
Sedlacek, Francis	Sed-Fab Company, Inc.	01/29/87
	Sedlacek, Francis	01/29/87
Jet Air Corporation, et al	Jet Air Corporation	08/14/86
	Straza, George	08/14/86
	Costa, Joao	08/14/86



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

APR 6 1988

Honorable Carl Levin
Chairman
Subcommittee on Oversight of
Government Management
Committee on Governmental Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

At a hearing before the Permanent Subcommittee on Investigations on October 15, 1987, at which I testified on the subject of product substitution investigations, you raised the issue of Defense prime contractors awarding subcontracts to companies which may have been suspended or debarred by the Government.

Specifically, you inquired as to how many of our top 100 contractors subscribe to the list of suspended or debarred bidders, which is compiled monthly by the General Services Administration. Though requested last November, I have only now received the subscriber list from the Government Printing Office. A review of that list indicates that 34 of the top 100 Defense contractors receive the list in at least one of their subdivision buying offices. In addition to the top 100 contractors, the subscriber list indicates that the information is sent to 103 additional corporate addresses. Thus a relatively small number of the total prime contractors who conduct business with the Department of Defense receive the list of suspended and debarred bidders.

I hope this information is helpful to you.

Sincerely,

Derek J. Vander Schaaf
Deputy Inspector General

cc: Honorable Sam Nunn, Chairman
Permanent Subcommittee on Investigations

Honorable William V. Roth, Jr. ←
Ranking Minority Member
Permanent Subcommittee on Investigations



EFFECT OF BAD PARTS ON
CIRCUIT BOARD YIELD

NUMBER OF PARTS ON BOARD

	50	100	200	300	400
97%	21.8%	4.8%	0.26%	0.01%	0.005%
98%	36.4%	13.3%	1.8%	0.23%	0.03% *
99%	60.5%	36.6%	13.4%	4.9%	1.8%
99.9%	95.1%	90.5%	81.9%	74.1%	67.0%
99.99%	99.5%	99.0%	98.0%	97.0%	96.0%

GOOD PARTS
Incoming Receiving

(1 IN 10,000)

BAD

*OR
(100 part/million)*

* MIL-M-38510, LEVEL B

LAB CONTROL NUMBER

C 05106

Mitchell Laboratories, Inc.

7707 BEQUETTE STREET • PICO RIVERA, CALIF. 90660 • (714) 773-9057 • (213) 861-9997

CERTIFICATE OF INSPECTION

SOLD TO

THE SPRING WORKS, INC.
1859 Balcraft Avenue
South El Monte, CA 91733

DATE

RECEIVED 6/4/85

DATE

SHIPPED 6/5/85

YOUR P.O. NO. 1031

HEAT NO.

MATERIAL 17-7PH

MAT'L SPEC.

SPECIFICATION(S)

SHIP TO

PENETRANT: EHS 92358 Class A

QUANTITY	PART NO. OR DESCRIPTION	PROCESS	ACCEPTED	NOT ACCEPTED
50	P/N 2042227-1C	Penetrant Inspection	50	0

WE HEREBY CERTIFY THE PARTS LISTED HAVE BEEN TESTED IN CONFORMANCE WITH THE SPECIFICATION NOTED. THIS REPORT REPRESENTS MITCHELL LABORATORIES, INC. INTERPRETATION OF THE RESULTS OBTAINED FROM THE TEST AND IS NOT TO BE CONSTRUED AS A GUARANTY OR WARRANTY OF THE CONDITION OF THE MATERIALS TESTED.

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FAA REPAIR STATION #405-31

By R. Garcia Date 6/5/85
PENETRANT INSPECTOR
By _____ Date _____
MAGNETIC PARTICLE INSPECTOR
By _____ Date _____
ULTRA SONIC INSPECTOR
By _____ Date _____
RADIOGRAPHIC INSPECTOR

Mitchell Laboratories, Inc.

C 05106

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SPECIFICATION(S)

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PENETRANT: RMS 92358 Class A

NAME

QUANTITY	PART NO. OR DESCRIPTION	PROCESS	ACCEPTED	NOT ACCEPTED
5,000 <i>28 1/2 28 1/4 86</i>	P/N 2042227-1C	Penetrant Inspection	5,000	0

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FAA REPAIR STATION #485-31

By R. Garcia Date 6/5/85

PENETRANT INSPECTOR R. Garcia

By _____ Date _____

MAGNETIC PARTICLE INSPECTOR

By _____ Date _____

ULTRA SONIC INSPECTOR

By _____ Date _____

RADIOGRAPHIC INSPECTOR



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

JUL 10 1987

Mr. Richard V. Wiebusch
United States Attorney
for New Hampshire
Post Office Box 480
James Cleveland Federal Building
and Courthouse
Concord, New Hampshire 03301

Dear Mr. Wiebusch:

As you may recall, in an exchange of correspondence in 1985 between the Secretary of Defense and the Attorney General, the Departments of Defense and Justice agreed to attach the highest investigative and prosecutive priority to product substitution cases--cases where the Department of Defense has been provided with substandard, defective or untested products. A sampling of several recent prosecutions and ongoing audit work shows that the substituted and nonconforming products are often critical components in major Department of Defense weapon systems. Recent criminal cases include the following defective products:

- o Valves for the safety eject system for the F-4 jet, and nozzles for fire suppression systems;
- o Landing gear, assemblies, seat belt anchors for aircraft ejection seats, washers for helicopter rotors and gas caps for aircraft;
- o M-27 fins for 60mm mortar rounds;
- o Springs used in CH-47 helicopters, cruise missiles, F-18 fighters, and B-1 bombers;
- o Dust and moisture seals for master cylinders;
- o Hydraulic bearings used in helicopters;
- o Breech bolts for the M-60 and M-85 machine guns;
- o Guidance fins for the Sidewinder missile; and
- o Fire retardant laminates to be used on-board Navy ships.

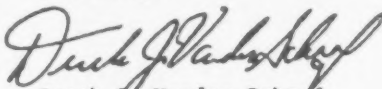
A review by this office indicated that, in some cases, the Government may not be providing the sentencing court (and the probation office for presentencing report purposes) with all available information concerning the mission impact of substituted products. In an effort to enhance the likelihood of incarceration in such cases, Department of Defense criminal investigators have been asked to ensure the provision of information relating to mission impact to both the assigned prosecutor and the cognizant probation office. I would like to request your support in using the information as part of the Government's sentencing memorandum in product substitution cases. Relatedly, I request that no agreements be struck as part of plea negotiations wherein the Government is restricted from providing information to the sentencing court to establish the mission impact of the defendant's conduct. Also, the use of Department of Defense expert witness testimony is encouraged at sentencing hearings, if necessary, to establish the adverse mission impact in product substitution cases.

The reliability of our weapon systems, and the confidence of U.S. troops in such systems, is a fundamental requirement to an effective national defense. Your support in seeking maximum criminal sentences and civil recoveries in product substitution cases, thereby enhancing deterrence, is an extremely important factor in attaining that requirement.

If I can be of assistance in developing sentencing information in product substitution cases, please contact me or Mr. Michael C. Eberhardt, Assistant Inspector General for Criminal Investigations Policy and Oversight, at (202) 694-8957.

Your continued cooperation is appreciated.

Sincerely,



Derek J. Vander Schaaf
Deputy Inspector General

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